Tajikistan
Economic Performance Assessment

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Contents

Illustrations

NOTE ON DATA SOURCES

In addition to our standard sources, we rely heavily in this report on data from the International Monetary Fund (IMF), the National Bank of Tajikistan, and Tajikistan's Poverty Reduction Strategy Paper (PRSP) progress reports of June 2005 and January 2006. IMF data considered for this report include publicly available data as of February 9, 2006.

In general, data for Tajikistan are of reasonable quality for a low-income country, though could be improved in some areas. A mission to prepare the Report on Observance of Standards and Codes (ROSC) visited Tajikistan in March 2005 and reported that compilation of data on consumer prices, government statistics, and monetary statistics is broadly in line with sound methodologies. The mission also noted, however, that wider data scope of data for national accounts and producer prices are needed. Source data are well developed in all areas of statistics. Collection of balance-of-payment statistics has improved notably since 1997, with some exceptions. Global Insight, which analyzes and forecasts macroeconomic developments in Tajikistan regularly for government and private clients, finds Tajik official data adequate and uses them in models and reports.[1]

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[1] CAS team member from Global Insight was one of the writers for this report.

HIGHLIGHTS OF TAJIKISTAN'S PERFORMANCE

Economic Growth	The economy has been growing at an average rate of nearly 10 percent for several years. Despite this, per capita GDP is still the lowest in the former Soviet Union and has not yet returned to 1990 (pre-independence) levels. Fixed investment is extremely low.
Poverty	Poverty rates are high, but declining, falling from 83 percent in 2001 to 68 percent in 2003. Much of the fall can be attributed to one-off factors; Tajikistan must ensure that current growth rates translate into further poverty reduction.
Economic Structure	Agriculture accounts for a large share of employment, but a small share of value-added, signaling low productivity in that sector. Services contribute the most to the value-added. Industrial and agricultural sectors are dominated by aluminum and cotton, respectively, suggesting that diversification is needed.
Demography and Environment	The Tajik population has been growing at rates above regional averages. The age dependency ratio is very high, but declining. Environmental performance is poor, particularly in regards to water.
Gender	Gender inequity is a serious problem, especially within the education system.
Fiscal and Monetary Policy	The Tajik authorities have achieved macroeconomic stability since 2004. The budget deficit has been brought under control, and inflation has come down to single-digit levels.
Business Environment	Corruption is rampant, hampering firms' ability to conduct business. Rule of law and regulatory quality are weak.
Financial Sector	The underdeveloped financial sector is a serious concern; monetization is extremely low. Rising private sector credit is a positive sign.
External Sector	The current account deficit has been brought under 5 percent of GDP thanks mainly to increased workers' remittances. Substantial debt forgiveness reduced foreign debt to moderate levels. A major problem is an excessive concentration of exports on a few commodities, primarily aluminum.
Economic Infrastructure	The quality of transportation, electricity, and communications infrastructure are low and need to be improved to support investment and attract FDI.
Health	Health indicators are generally comparable to regional averages, with the noteworthy exceptions of low child immunization rates and access to improved water sources. Government expenditure on health is extremely low.
Education	While primary education indicators paint a bright picture – enrollment and persistence rates are high – there are signs of problems within the system. Government expenditure is low, higher education enrollment is low, and drop-out rate is high.
Employment and Workforce	The unemployment rate is high, although not many of the unemployed register. Large numbers of Tajiks are working abroad, mostly in Russia.
Agriculture	Tajik agriculture is much less productive than the rest of the economy. Cotton, the dominant crop, has suffered from collectivized privatization, resulting in substantial drops in productivity and financial losses.

Note: The methodology used for comparative benchmarking is explained in the Appendix.

TAJIKISTAN: NOTABLE STRENGTHS AND WEAKNESSES—SELECTED INDICATORS

Indicator[a]	Strength	Weakness
Growth Performance		
Growth of labor productivity (%)	✓	
Per capita GDP (PPP Dollars and U.S. Dollars)		✓
Real GDP growth	✓	
Share of gross fixed investment (% of GDP)		✓
Share of gross fixed private investment (% of GDP		✓
Poverty and Inequality		
Population (%) below national poverty line		✓
Population (%) below minimum dietary energy consumption		✓
Demography and Environment		
Adult literacy rate (%)	✓	
Age dependency rate (dependents per worker)		✓
Environmental sustainability index		✓
Gender		
Gross enrollment rate, all levels (ratio of male to female)		✓
Fiscal and Monetary Policy		
Inflation rate (%)	✓	
Business Environment		
Corruption perception index		✓
Regulatory quality index		✓
Rule of law index		✓
Financial Sector		
Money supply (M2 as a % of GDP)		✓
External Sector		
Concentration of exports (top 3 exports % of total exports)		✓
Foreign direct investment (% GDP)		✓
Gross international reserves (months of imports)		✓
Inward FDI potential index		✓
Trade (% GDP)	✓	
Economic Infrastructure		
Internet users (per 1,000 people)		✓
Quality of infrastructure index – electricity		✓
Telephone cost (average local call)	✓	

Indicator[a]	Strength	Weakness
Telephone density (fixed line and mobile, per 1,000 people)		✓
Science and Technology		
Patent applications filed by residents		✓
Health		
Access to improved water source (%)		✓
Births attended by skilled health personnel		✓
Child immunization rate (%)		✓
Public health expenditure (% of GDP)		✓
Education		
Net primary enrollment rate (%)	✓	
Youth literacy rate (%)	✓	
Employment and Workforce		
Labor force participation rate (total)		✓
Labor force participation rate (female)		✓
Unemployment rate		✓
Agriculture		
Agriculture value added per worker (1995 U.S. dollars)		✓
Cereal yield (kilograms per hectare)		✓
Crop production index	✓	
Livestock production index	✓	

[a] *The chart identifies selective indicators for which Tajikistan's performance is particularly strong or weak relative to the benchmark standards; details are discussed in the text. The separate Data Supplement presents a full tabulation of the data examined for this report, including the international benchmark data, along with technical notes on the data sources and definitions.*

1. Introduction

This paper is one of a series of Economic Performance Assessments prepared for the EGAT Bureau to provide USAID missions and regional bureaus with a concise evaluation of a broad range of indicators relating to economic growth performance in designated host countries. The report draws on a variety of international data sources[2] and uses international benchmarking against reference group averages and comparator countries (Bulgaria, Romania, and Russia)[3] to identify major constraints, trends, and opportunities for strengthening growth and reducing poverty.

The methodology used here is analogous to examining an automobile dashboard to see which gauges are signaling problems. Sometimes a blinking light has obvious implications—such as the need to fill the fuel tank. In other cases, it may be necessary to have a mechanic probe more deeply to assess the source of the trouble and discern the best course of action.[4] Similarly, the Economic Performance Assessment is based on an examination of key economic and social indicators, to see which ones are signaling problems. In some cases a "blinking" indicator has clear implications, while in other instances a detailed study may be needed to investigate the problems more fully and identify an appropriate course for programmatic action.

The analysis is organized around two mutually supportive goals: transformational growth and poverty reduction.[5] Rapid and broad-based growth is the most powerful instrument for poverty reduction. At the same time, measures aimed at reducing poverty and lessening inequality can help to underpin rapid and sustainable growth. These interactions create the potential for stimulating a virtuous cycle of economic transformation and human development.

Transformational growth requires a high level of investment and rising productivity. This is achieved by establishing a strong *enabling environment for private sector development*, involving multiple elements: macroeconomic stability; a sound legal and regulatory system,

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[2] Sources include the latest data from USAID's internal Economic and Social Database (ESDB) and readily accessible public information sources. The ESDB is compiled and maintained by the Development Information Service under PPC/CDIE. It is accessible to staff through the USAID intranet.

[3] At the request of the USAID mission, we have also included figures for Kazakhstan and the Kyrgyz Republic in the attached data supplement.

[4] Sometimes, too, the problem is faulty wiring to the indicator—analogous here to faulty data.

[5] In USAID's white paper *U.S. Foreign Aid: Meeting the Challenges of the Twenty-first Century* (January 2004), transformational growth is a central strategic objective, both for its innate importance as a development goal and because growth is the most powerful engine for poverty reduction.

including secure contract and property rights; effective control of corruption; a sound and efficient financial system; openness to trade and investment; sustainable debt management; investment in education, health, and workforce skills; infrastructure development; and sustainable use of natural resources.

In turn, the impact of growth on poverty depends on policies and programs that create opportunities and build capabilities for the poor. We call this the ***pro-poor growth environment***.[6] Here, too, many elements are involved, including effective education and health systems; policies facilitating job creation; agricultural development (in countries where the poor depend predominantly on farming); dismantling barriers to micro and small enterprise development; and progress toward gender equity.

The present evaluation of these conditions must be interpreted with caution, because a concise analysis of this sort cannot provide a definitive diagnosis of economic problems, or simple answers to questions about programmatic priorities. Instead, the aim of the analysis is to spot signs of serious problems for economic growth, based on a review of selected indicators, subject to limits of data availability and quality. The results should provide insight about potential paths for USAID intervention, to complement on-the-ground knowledge and further in-depth studies.

The remainder of the report discusses the most important results of the diagnostic analysis, in three sections: Overview of the Economy; Private Sector Enabling Environment; and Pro-Poor Growth Environment. Table 1-1 summarizes the topic coverage. The Appendix provides a brief explanation of the criteria used for selecting indicators, the benchmarking methodology, and a table showing the full set of indicators examined for this report.

Table 1
Topic Coverage

Overview of the Economy	Private Sector Enabling Environment	Pro-Poor Growth Environment
• Growth Performance • Poverty and Inequality • Economic Structure • Demographic and Environmental Conditions • Gender	• Fiscal and Monetary Policy • Business Environment • Financial Sector • External Sector • Economic Infrastructure • Science and Technology	• Health • Education • Employment and Workforce • Agriculture

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[6] A comprehensive poverty reduction strategy also requires programs to reduce the *vulnerability* of the poor to natural and economic shocks. This aspect is not covered in the template since the focus is economic growth programs. In addition, it is difficult to find meaningful and readily available indicators of vulnerability to use in the template.

2. Overview of the Economy

This section reviews basic information on Tajikistan's macroeconomic performance, poverty and inequality, economic structure, demographic and environmental conditions, and indicators of gender equity.[7] Some of the indicators cited here are descriptive rather than analytical and are included to provide context for the performance analysis.

GROWTH PERFORMANCE

Judging by per capita GDP measured in both current U.S. dollars and Purchasing Power Parity (PPP) terms, Tajikistan is the poorest former Soviet republic. In 2004, its per capita GDP stood at $328, while the average for the low-income former Soviet Republics (LI-FSR) was $400. Tajik per capita GDP represents only a fraction of per capita GDP in Bulgaria ($3,074), Romania ($3,207), and Russia ($4,093), which, unlike Tajikistan, are all lower middle-income countries. Tajik per capita GDP, when measured in PPP terms ($1,246), was several times higher than in current U.S. dollars but remains well below the levels in the LI-FSR group ($1,850), Bulgaria ($8,500), Romania ($7,642), and Russia ($10,180).

Largely as a result of the disruption of ties with other former Soviet republics and its own civil war, the Tajik economy collapsed in the first half of the 1990s. By 1996, Tajik GDP stood at only 41.5 percent of the 1991 level.[8] The country's economy started to recover in 1997, and in the past several years has rapidly regained lost ground. Even after several years of nearly 10 percent growth, however, real GDP has not returned to the level prevailing at the start of the civil war; Tajik GDP in 2004 was still 26.7 percent below what it was in 1991. This is largely because production has not yet returned to Soviet-era levels in industry, although it has returned to those levels in agriculture and services.[9] From 2000 to 2004, GDP registered a strong 9.7 percent annual average increase. In 2004, GDP grew 10.6 percent, the highest growth rate in five years. This rate was above the range predicted by the benchmark regression for a country with

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[7] The separate Data Supplement provides a full tabulation of the data for Tajikistan and the international benchmarks, including indicators not discussed in the text, as well as technical notes for each indicator. The supplement also provides data for Kazakhstan and the Kyrgyz Republic at the request of the Tajikistan mission.

[8] IMF, World Economic Outlook Database, September 2005.

[9] Comparing Soviet and post-Soviet levels of production must be done with caution, as the changes in production combine structural and macroeconomic effects. In many industries, production was profitable only under the distorted relative prices and subsidized credits; when market prices were introduced, such production collapsed, which shows as a drop in industrial production.

Tajikistan's characteristics, as well as the LI-FSR average (7.1 percent), and the rates in Bulgaria (5.7 percent), Romania (8.3 percent), and Russia (7.1 percent) (Figure 2-1).

Figure 2-1
Real GDP Growth Rate

Tajikistan's growth has been exceptionally high in the past five years.

Time Series

Year	Tajikistan Data
2000	8.3
2001	10.2
2002	9.1
2003	10.2
2004	10.6
Summary for 2000–2004	
Five-year average	9.7
Trend growth rate	N/A

Source: World Economic Outlook database   CAS Code: 11p3
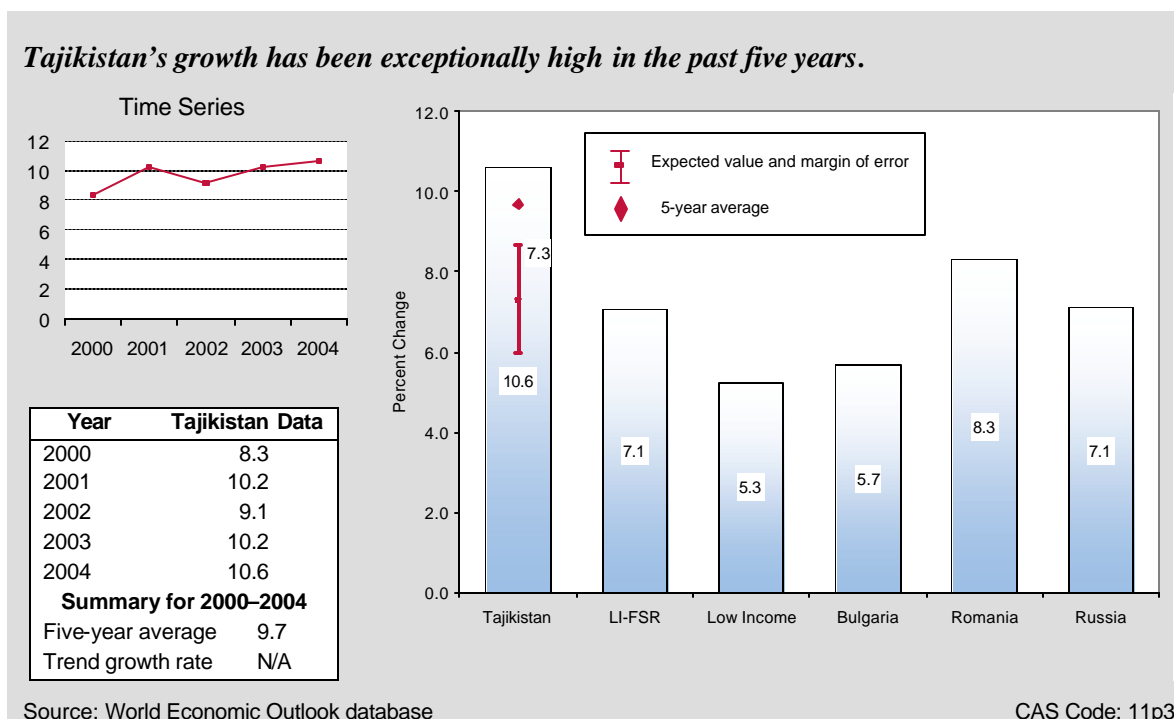
According to the Interfax news agency, Tajik economic growth slowed to 6.1 percent year-over-year in January–November 2005. It appears that this slowdown was largely a result of declines in cotton and electricity outputs. It remains to be seen whether the declines are permanent or temporary, caused, possibly, by bad weather.

Factors that have contributed to the strong growth of the past several years include macroeconomic and political stabilization, market reform, and inflows of funds from abroad in the form of workers' remittances, loans, and grants. Economic expansion was boosted by rapidly rising labor productivit y.[10] Between 1999 and 2003, productivity increased 5.9 percent per year on average, exceeding labor productivity growth in the LI-FSR countries (4.9 percent), Bulgaria (4.7 percent), and Romania (4.7 percent), though falling short of the level for this indicator in Russia (7.4 percent). Labor productivity gained from improved capacity utilization, a trend observed in many transition countries,[11] and was also stimulated by fixed investment growth. The level of fixed investment relative to GDP, however, remained very low. In 2004, it stood at

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[10] Labor productivity is defined here as the ratio of GDP (in constant prices) to the size of the working-age population. The report template uses working-age population instead of work hours (the common practice) because of data availability and to allow for comparison across countries. See technical notes in the Data Supplement.

[11] IMF, Republic of Tajikistan: Selected Issues and Statistical Appendix, Report No. 05/131, April 2005.

13.5 percent, well below the range predicted by the benchmark regression. The share of fixed investment in GDP in Tajikistan was substantially lower than that of the LI-FSR group (16.1 percent), Bulgaria (19.6 percent), Romania (22.5 percent), and Russia (18.2 percent) (Figure 2-2). Especially worrisome is the low share of fixed private investment, which stood at 5.4 percent in 2004.

Figure 2-2
Gross Fixed Investment, percent of GDP

Gross fixed investment remains unacceptably low, despite recent increases.

Year	Tajikistan Data
2001	9.3
2002	10.9
2003	12.0
2004	13.5
Summary for 2001–2004	
Four-year average	11.4
Trend growth rate	12.9

Source: Tajik data from the IMF Fifth review under the PRGF; benchmarking data from the World Development Indicators (WDI) 2005

CAS Code: 11s3
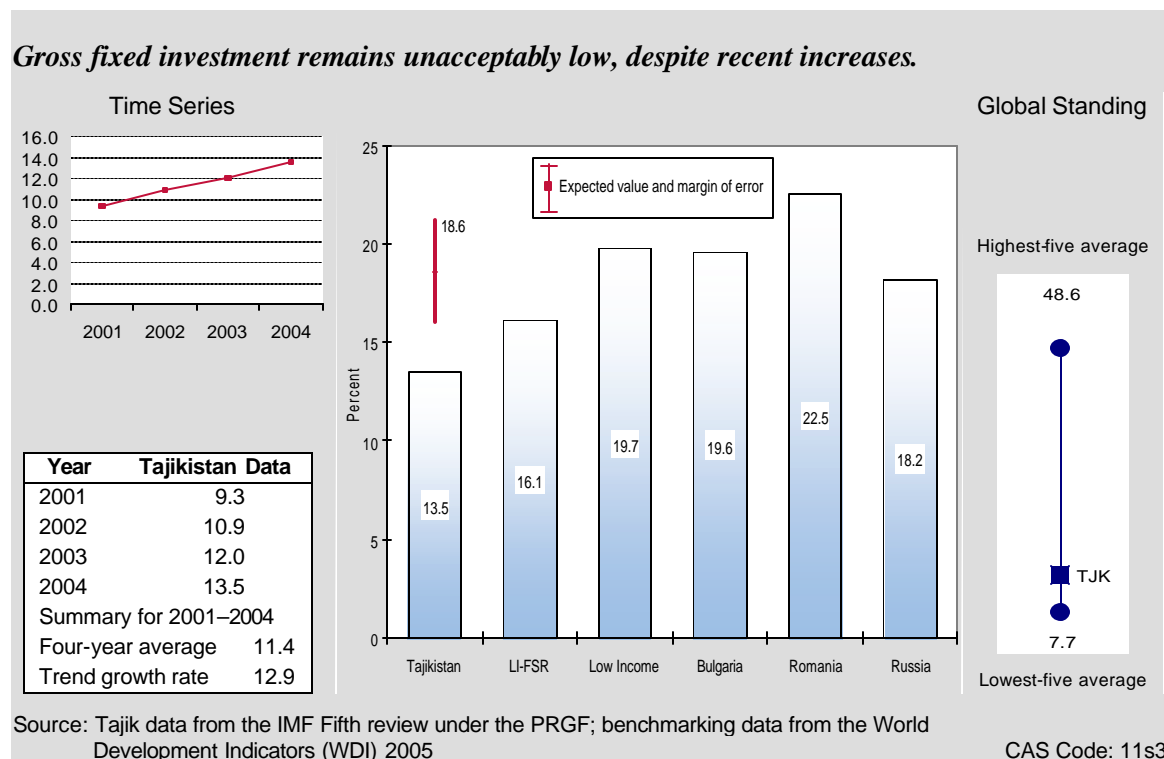
The prospects for sustainable growth are uncertain. In some sectors, substantial unused capacity may remain. Putting this capacity to use may enable strong growth to continue in the short tem. The sustainability of economic expansion in the medium term will depend on the country's ability to raise fixed investment and ensure the efficiency of the investment. This ability will be affected by progress in the conversion of remittances into investment and the attraction of foreign direct investment (FDI) (see the External Sector section). Diversification of production and exports, thereby reducing the country's vulnerability to fluctuations in the world prices of cotton and aluminum, will also be critical for sustaining growth.

POVERTY AND INEQUALITY
Poverty in Tajikistan is widespread, though declining. In 2003, 68 percent of Tajiks lived below the national poverty line, down from 83 percent in 2001. The 2003 rates are still higher than the regression benchmark of 59 percent and substantially higher than levels found in Bulgaria (with

12.8 percent), Romania (29.6 percent), and Russia (17.8 percent).[12] Though poverty-rate comparisons should be interpreted with caution because of differences in definitions, the poverty rate differential is striking. Similarly, the share of people not receiving sufficient nutrition (61.0 percent, on average, in 2000–2002) is well above the regression benchmark for a country with Tajikistan's characteristics (37.5 percent) and all three richer comparator countries (Bulgaria with 11.0 percent, Romania with 1.0 percent, and Russia with 4.0 percent) (Figure 2-3).

Figure 2-3

Population below Minimum Dietary Energy Consumption, percent

Undernourishment in Tajikistan, the poorest of the former Soviet republics, remains high.

Source: WDI 2005   CAS Code: 12s1
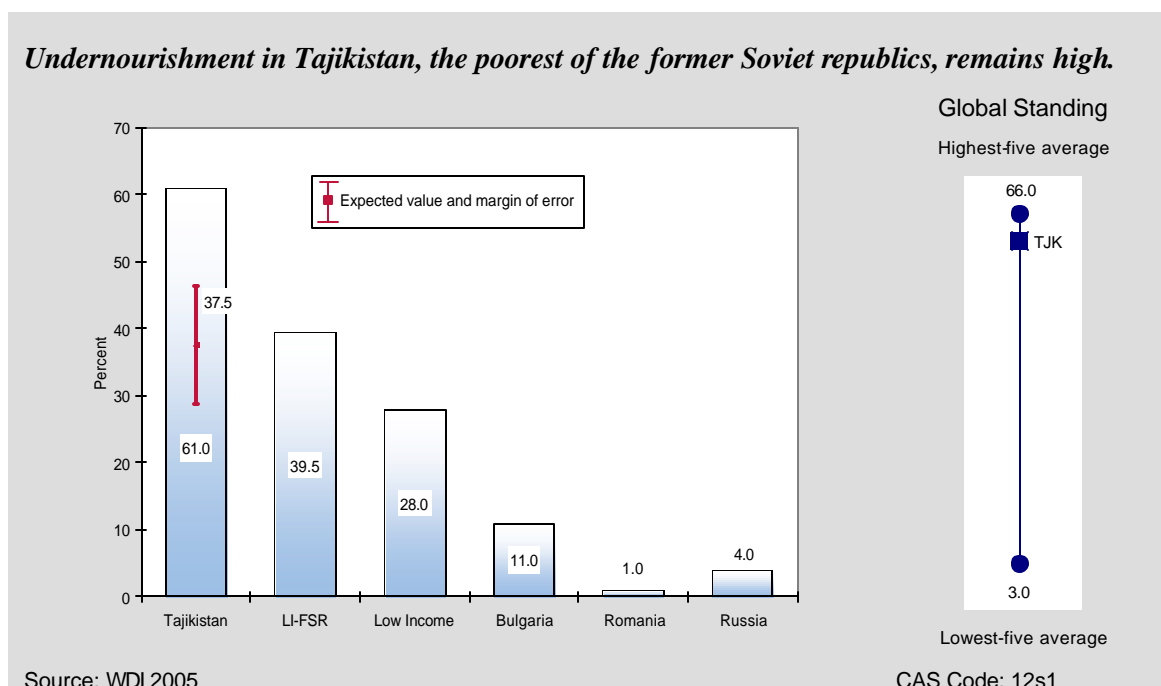
In the presence of this widespread poverty, the fact that the share of the population living below $1 PPP per day is just 7.4 percent (identical to the LI-FSR average) signals that most people live just above that poverty level.[13] This figure is identical to the levels found in other LI-FSR countries and the same is true for Tajikistan's performance on the poverty gap at $1 PPP per day (1.3 for Tajikistan and LI-FSR on average), which measures the depth and incidence of poverty. According to the World Bank, there are regional disparitie s—almost three-quarters of the poor

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[12] Tajikistan does not have a self-defined poverty line. Both World Bank and IMF use the incidence of poverty at the $2 PPP per day level to measure the percentage of people below the national poverty line. To retain consistency between this report and other published reports, this CAR also adopts that definition.

[13] Alternative source indicates that the share of population living on less than $1 PPP per day is actually 18 percent. See IMF, Republic of Tajikistan; Poverty Reduction Strategy Paper Second Progress Report, Country Report No. 06/1, January 2006.

live in the Khalton and Sugd oblasts, which account for 65 percent of the population—and that poverty is predominantly rural. [14]

According to the same source, most poverty reduction has resulted from one-time factors such as the cessation of the civil war, the recovery from the macroeconomic shock that followed the collapse of the Soviet Union, and an increase in migration. Migration is likely to have a direct impact on poverty through rising wages and an indirect impact on poverty through remittance income.

Tajikistan has had a Poverty Reduction Strategy since 2002. The government of Tajikistan identified four main elements in its strategy for reducing poverty: encouragement of an accelerated, socially fair and labor-intensive economic growth emphasizing exports; efficient and fair provision of basic social services; targeted support to the poorest population groups; and efficient governance and improvement in security. Implementation has been slower than expected, particularly in terms of structural reform. Although there is a consensus that economic growth led to a decline in poverty, indicators of social services and infrastructure failed to improve. [15] Concerted action by the Tajik government and donor assistance agencies is needed to ensure that economic growth translates into further reductions in poverty.

ECONOMIC STRUCTURE

Tajik employment is highly concentrated in agriculture, and cotton accounts for about 80 percent of employment in agriculture.[16] The share of agriculture in total employment is large and increasing. It rose from 64.4 percent in 1999 to 67.7 percent in 2003, significantly exceeding the level of this indicator in the LI-FSR group (51.0 percent), and especially in more advanced Bulgaria (26.3 percent), Romania (42.3 percent), and Russia (11.8 percent). The shares of those employed in services and industry in 2003 stood at 24.7 percent and 7.7 percent, respectively, below those in the LI-FSR group and the comparator countries, and, conversely to the share of agriculture, shrank during the period under consideration (Figure 2-4).

Industry and services are much more productive than agriculture. As a result, the Tajik output structure is more balanced than the employment structure. In output, the largest sector is services, whose share in GDP climbed from 40.8 percent in 2000 to 47.7 percent in 2004, on par with the share of services in the LI-FSR group (48.0 percent), though still less than in Bulgaria (57.5 percent), Romania (52.1 percent), and Russia (60.7 percent). The shares of agriculture and industry in Tajik GDP shrank during this period, to 24.1 percent and 28.2 percent, respectively.

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[14] World Bank, Republic of Tajikistan: Poverty Assessment Update, Report No. 30853-TJ, January 6, 2005.

[15] Ibid; IMF, Republic of Tajikistan: Poverty Reduction Strategy Paper Progress Report, Country Report No. 04/280, August 2004; and IMF, Republic of Tajikistan: Poverty Strategy Paper Second Progress Report, Country Report No. 06/1, January 2006.

[16] World Bank, PSIA Summary – Tajikistan Cotton Sector Reform, see http://web.worldbank.org/wbsite/external/topics/extpoverty/

Figure 2-4

Output Structure and Workforce Structure, percent of GDP

Agriculture accounts for two-thirds of the workforce but has extremely low productivity.

Source: Tajik data from the IMF Statistical Appendix   CAS Codes: 13 p1 and 13p2
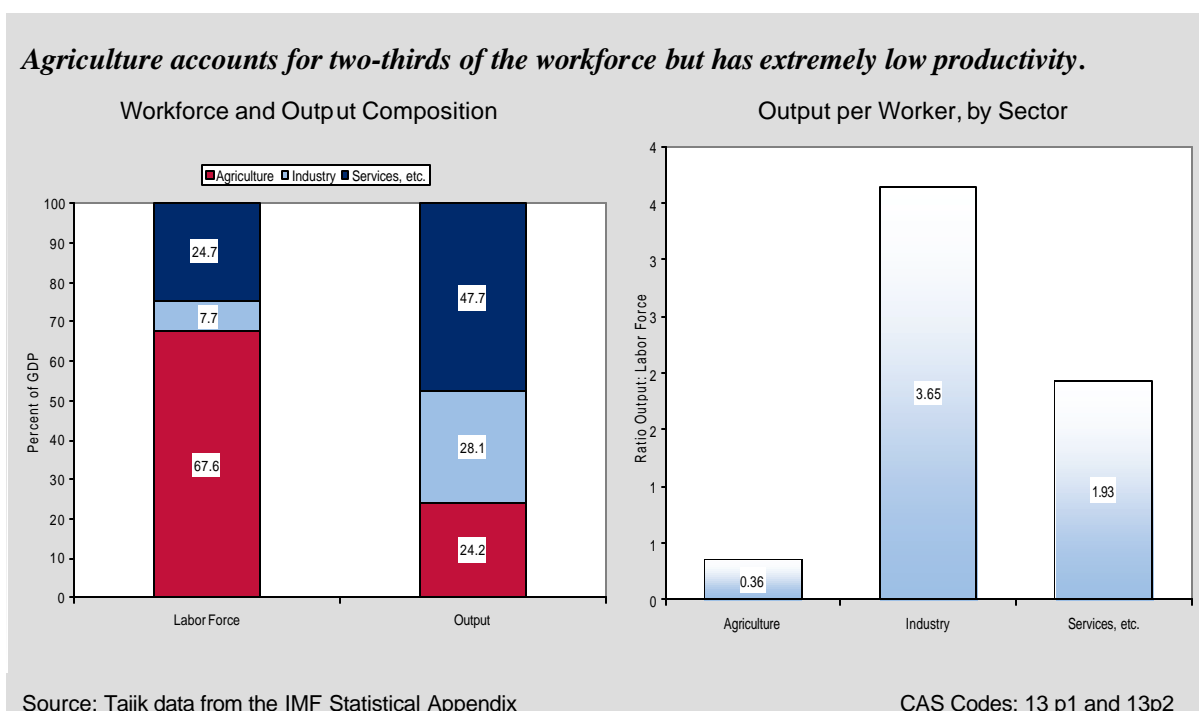
Industry contributes to GDP more in Tajikistan than, on average, in the LI-FSR group, though less than in Bulgaria, Romania, and Russia. The most important industrial sector by far is aluminum production.[17] By contrast, the share of agriculture in GDP in Tajikistan is less than in the LI-FSR group, but more than in the comparator countries. Cotton is the main Tajik crop. The outputs of aluminum and cotton are still below their pre-independence levels.

According to the International Finance Corporation (IFC), whose report was based on data from the State Statistics Committee of the Republic of Tajikistan, the number of employed in the small and medium business sector increased 33.4 percent between 1999 and 2002, reaching 25 percent of total employment.[18] The share of this sector in GDP also rose during this period, though not quickly, from 29.3 percent to 35.3 percent.

Tajik agriculture's large share in employment poses a great challenge for poverty reduction because of the low productivity of that sector. It is difficult to see how rising employment in agriculture sector can be anything but a negative for transformational development, especially given the heavy concentration in cotton within that sector, where productivity has fallen substantially and most of the sector is operating inefficiently.[19] Donor assistance agencies may help Tajikistan improve agricultural productivity and shift employment to nonagricultural sectors,

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[17] The share of aluminum production value added in manufacturing value added exceeds 40 percent (IMF, "Republic of Tajikistan: Selected Issues and Statistical Appendix," Report No. 05/131, April 2005).

[18] IFC, Business Environment in Tajikistan as Seen by Small and Medium Businesses, 2003.

[19] Ibid.

as well as support ongoing efforts to privatize cotton farming and improve the oligopolistic marketing and supply chain in cotton. The country may also benefit from support in SME development.

DEMOGRAPHY AND ENVIRONMENT

The Tajik population grew at a 1.9 percent annual average rate in 2000–2004, reaching 6.7 million in 2004. This contrasts markedly with the performance of many Eastern European and former Soviet countries, where population has been stagnant or has declined; according to the United Nations World Population Prospects, during the same period, the population contracted in Bulgaria, Romania, and Russia.[20] Population growth for the LI-FSR countries averaged 0.8 percent annually over the same period. The United Nations projects significant continued population growth in Tajikistan. By 2030, the number of people in the country will reach 9.2 million, a 37 percent increase from 2004. At the same time, the Bulgarian, Romanian, and Russian populations are projected to decline rapidly.

The total age dependency ratio in Tajikistan is very high but has been declining. Because of the reduction in the ratio of children to workers, the total age dependency rate in Tajikistan declined from 0.80 dependents per worker in 1999 to 0.70 in 2003, within the range predicted by the benchmark regression. Nevertheless, it still substantially exceeds the LI-FSR average (0.62) and the rates in Bulgaria (0.44), Romania (0.44), and Russia (0.42) (Figure 2-5).The UN projects that the dependency rate in Tajikistan will continue to decline in the next 25 years thanks to a substantial decrease in the young age dependency rate, which will more than offset a slight rise in the old age dependency rate.[21] This contrasts favorably with projected dependency rate increases in Bulgaria, Romania, and Russia. Overall, although the projected changes in the age structure in Tajikistan and the consequent decline in the dependency rate are favorable, the country's authorities will need to prepare for a heavier financial burden for care for the elderly.

The adult literacy rate in Tajikistan was a near-perfect 99.5 percent in 2003, above the range predicted by the benchmark regression and the rates in Bulgaria (98.6 percent) and Romania (97.3 percent). Literacy rates exceeding 99 percent are common in the former Soviet Union—for Russia and on average for the LI-FSR countries, the latest figures are 99.6 percent and 99.2 percent, respectively.

The Tajik Environmental Sustainability Index of 38.6 in 2005 (on a scale from 0 for poor performance to 100 for excellent performance) points to serious environmental problems. This is below the range predicted by the benchmark regression, the LI-FSR average (46.9), and the indices in Bulgaria (50.0), Romania (46.2), and Russia (56.1). Analysis of index components indicates that the most troubled areas of Tajik environmental sustainability are basic human sustenance, environmental health, and international collaborative efforts. Water is a major issue

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[20] United Nations, World Population Prospects database.

[21] Ibid.

in Tajikistan. On the three water indicators—quality, quantity, and reducing water stress—
Tajikistan scores well below the peer group average.

Figure 2-5
Age Dependency Rate, Dependents per Worker

Age dependency rate has been falling, but remains high absolutely and relative to richer comparator countries.

Year	Tajikistan Data
1999	0.80
2000	0.79
2001	0.76
2002	0.73
2003	0.70
Summary for 1999–2003	
Five-year average	0.75
Trend growth rate	-3.51

Source: WDI 2005   CAS Code: 14p2
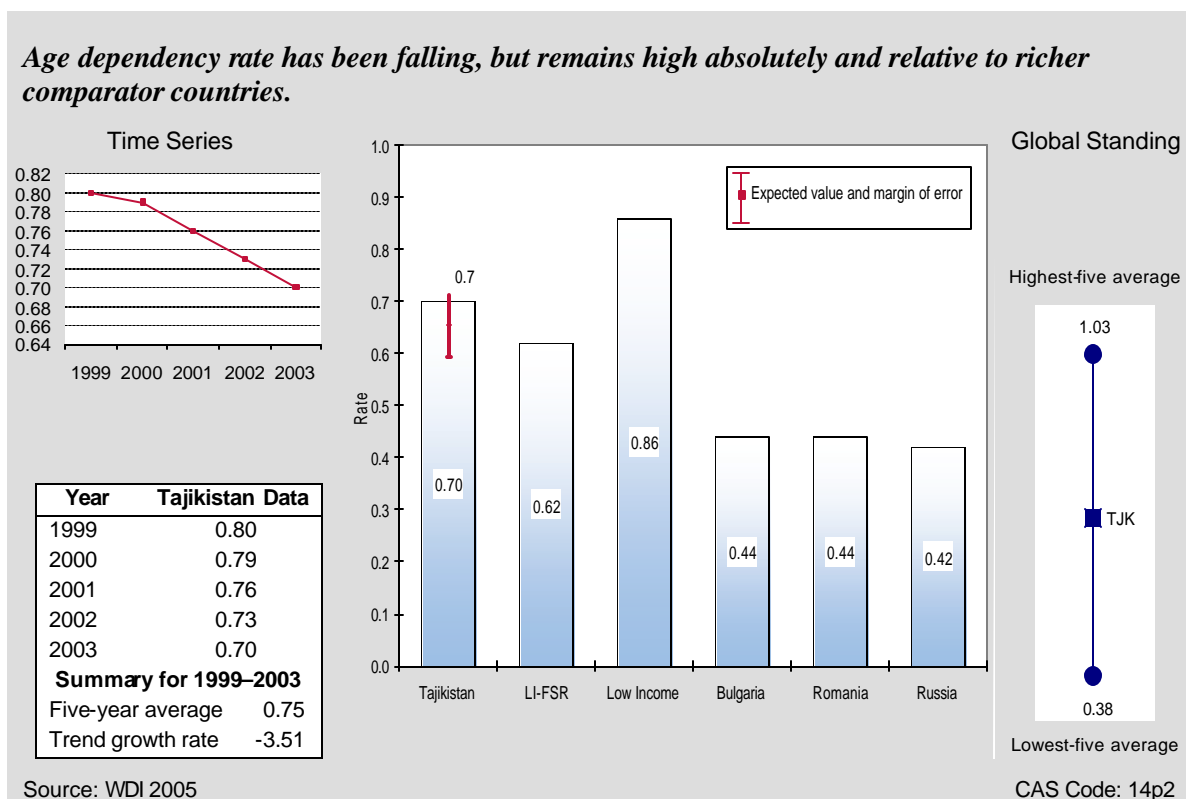
GENDER

Tajikistan's performance in terms of gender equity is poor. According to the World Bank, the gender gap in Tajikistan is the worst in the region.[22] Performance is especially poor in the school system. Tajikistan's ratio of male to female gross enrollment rates at all levels was 1.19 in 2003—82 percent of males were enrolled, compared to 69 percent of females. The gender ratios in the comparator country group and countries were all much better (Figure 2-6). In the LI-FSR group the ratio was 1.01, and in Bulgaria, Romania, and Russia the ratios were all below one. The gender gap is higher for secondary and tertiary education and is particularly problematic in rural areas.[23] Addressing the educational needs of girls is a must.

In contrast, the performance on literacy indicates equality, with a male-to-female ratio of 1.0 in 2003. The ratio is a result of nearly universal literacy, with rates above 99 percent for both males

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[22] The World Bank argues that gender inequality is worse in Tajikistan than in other Eastern European and Central Asian countries. World Bank, Republic of Tajikistan: Poverty Assessment Update, Report No. 30853-TJ, January 6, 2005.

[23] World Bank, Tajikistan: Poverty Assessment Update.

and females. The ratio is roughly identical to those for the comparator country group and countries, all of which were around 1.00.

Figure 2-6

Male-to-Female Gross Enrollment Rate, All Levels

Gender inequity, especially in the education system, is a serious problem.

Source: WDI 2005

CAS Code: 15p2
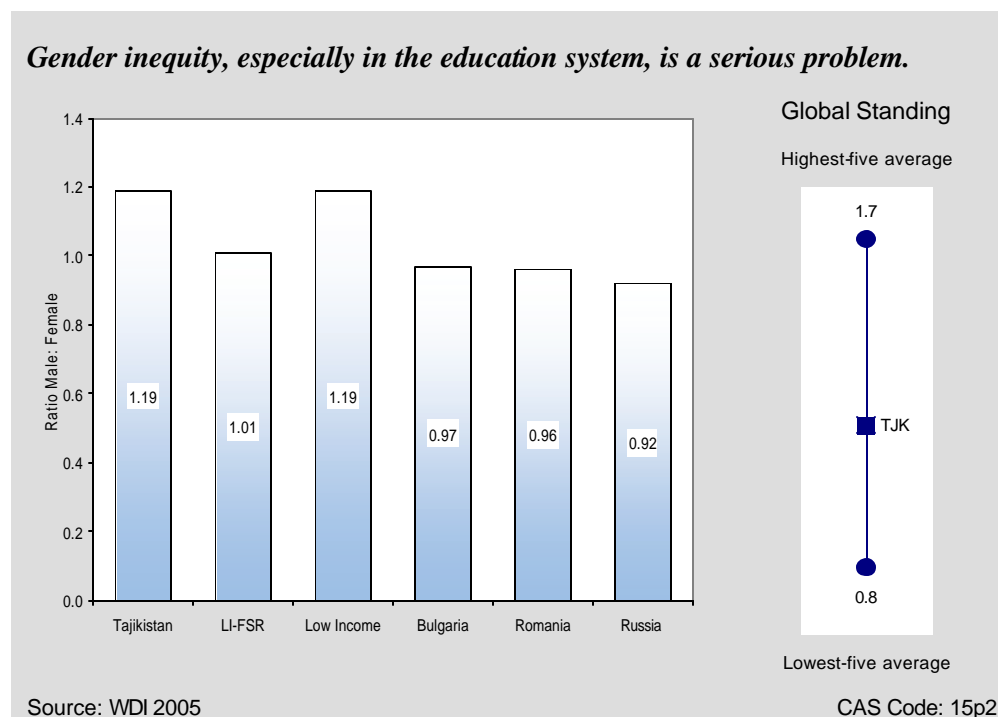
As in many other countries, women in Tajikistan are expected to live longer than men (66.3 years in 2003, compared to 61.0 years), which translates into a male-to-female life expectancy ratio of 0.92. This ratio is similar to the 0.91 average in the LI-FSR and the 0.90 ratios in Bulgaria and Romania (though above the low 0.83 ratio in Russia).

3. Private Sector Enabling Environment

This section reviews indicators for key components of the enabling environment for encouraging rapid and efficient growth of the private sector. Sound fiscal and monetary policies are essential for macroeconomic stability, which is a necessary (though not sufficient) condition for sustained growth. A dynamic market economy also depends on basic institutional foundations, including secure property rights, an effective system for enforcing contracts, and an efficient regulatory environment that does not impose undue barriers on business activities. Financial institutions play a major role in mobilizing and allocating saving, facilitating transactions, and creating instruments for risk management. Access to the global economy is another pillar of a good enabling environment, because the external sector is a central source of potential markets and modern inputs, technology, and finance, as well as competitive pressure for efficiency and rising productivity. Equally important is development of the physical infrastructure to support production and trade. Finally, developing countries need to adapt and apply science and technology as a basis for attracting efficient investment, improving competitiveness, and stimulating productivity growth.

FISCAL AND MONETARY POLICY

Tajikistan authorities have managed to achieve macroeconomic stability in recent years. The budget deficit was brought down and remains under control, government efforts to improve and rationalize government revenue collection appear to have been successful, and expenditures have remained in check. At the same time, further improvements are necessary.[24]

The government budget deficit declined steadily from 5.6 percent of GDP in 2000 to 1.8 percent in 2003 before rebounding slightly to 2.4 percent in 2004. At this level, the deficit is likely to be sustainable, but it is larger than the regression estimate (0.2 percent) and the average deficit in the LI-FSR (1.4 percent). The reduction in the deficit was accompanied by growth in both revenues and expenditures so that the government's share in the economy has increased by either measure (Figure 3-1). The share of government revenue in GDP rose at an average annual rate of 6.1 percent in the past five years, increasing from 13.6 percent of GDP in 2000 to 17.3 percent in

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[24] In 2005, the WDI adopted a new system for classifying fiscal data, although most developing countries still use the old classification. The WDI database therefore has fiscal data for few developing countries; because of the limited sample size, most of the group averages derived from WDI are not meaningful. In this section, comparisons are based on absolute standards, or benchmarks derived from 2004 WDI data, as well as figures for Bulgaria, Romania, and Russia.

2004. Nonetheless, it remains substantially below levels in the comparator countries or the LI-FSR average of 24.7 percent. A tax code revision that went into effect in 2005 has reduced incentives for tax avoidance, improved collections, and broadened the tax base, thereby leading to higher revenues in 2005.[25]

Figure 3-1

Government Revenue, percent of GDP

Tajik revenue mobilization efforts have led to higher revenues; the trend needs to continue.

Year	Tajikistan Data
2000	13.6
2001	15.2
2002	16.7
2003	17.0
2004	17.3
Summary for 2000–2004	
Five-year average	16.0
Trend growth rate	6.1

Note: The LI average is not calculated because of a new fiscal data classification in the WDI for 2005. See technical notes in Data Supplement.

CAS Code: 21p2

Source: Tajik data from the IMF Fifth Review under the PRGF; benchmarking data from the respective IMF Article IV Consultations for comparator countries and countries in the LI-FSR comparator group

Expenditure remained in check, rising at a slower pace than revenues and reaching 20.3 percent of GDP in 2004. This level is above the regression benchmark of 15.7 percent for a country with Tajikistan's characteristics, but well below the LI-FSR average of 28.3. It is also much lower than in Bulgaria, Romania, and Russia 37.5, 32.3, and 22.9 percent, respectively. The government of Tajikistan recognized the need to retain qualified personnel and increased wages in the public sector in 2005.[26] The increase was a one-off effort to help public sector wages catch-up with wages in the private sector, and is unlikely to cause an increased deficit, given rising revenues.

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[25] IMF, Tajikistan: Selected Issues and Statistical Appendix.

[26] Ibid.

On the monetary side, inflation has finally subsided because of more prudent policy. Inflation in 2004 stood at 7.1 percent, below the regression benchmark of 10.6 percent, the LI-FSR average of 8.0, and the values for Romania (11.9 percent) and Russia (10.9 percent). Bulgaria's inflation

was 6.1 percent (Figure 3-2). The current rate is a remarkable achievement considering that in 2000 and 2001 inflation was above 30 percent per year, and especially considering that the monetary authorities have targeted the exchange rate and growth in monetary aggregates alternatively, with limited availability of instruments. The decision to focus monetary policy on reducing money supply growth was instrumental in this success, as the growth rate of the broad money supply

> **IMF Program Status for Tajikistan**
>
> Tajikistan just completed its sixth review under the three-year Poverty Reduction and Growth Facility. The authorities commended the Tajik government for its macroeconomic policies and structural reform, but stressed the importance of proceeding with reforms. A new three-year arrangement has been approved. In December 2005, the IMF approved 100 percent debt relief for Tajikistan under the Multilateral Debt Relief Initiative to make funds available for Tajikistan to make progress in achieving its Millennium Development Goals.

decreased 78.2 percent in 2000 to 14.3 percent in 2004. The government of Tajikistan has identified developing additional instruments as its key objective;[27] donor assistance in the area may be needed.

Figure 3-2
Inflation Rate

Inflation appears to have been finally brought under control.

Year	Tajikistan Data
2000	32.9
2001	38.6
2002	12.2
2003	16.4
2004	7.1
Summary for 2000–2004	
Five-year average	21.4
Trend growth rate	N/A

Source: World Economic Outlook database

CAS Code: 21p4

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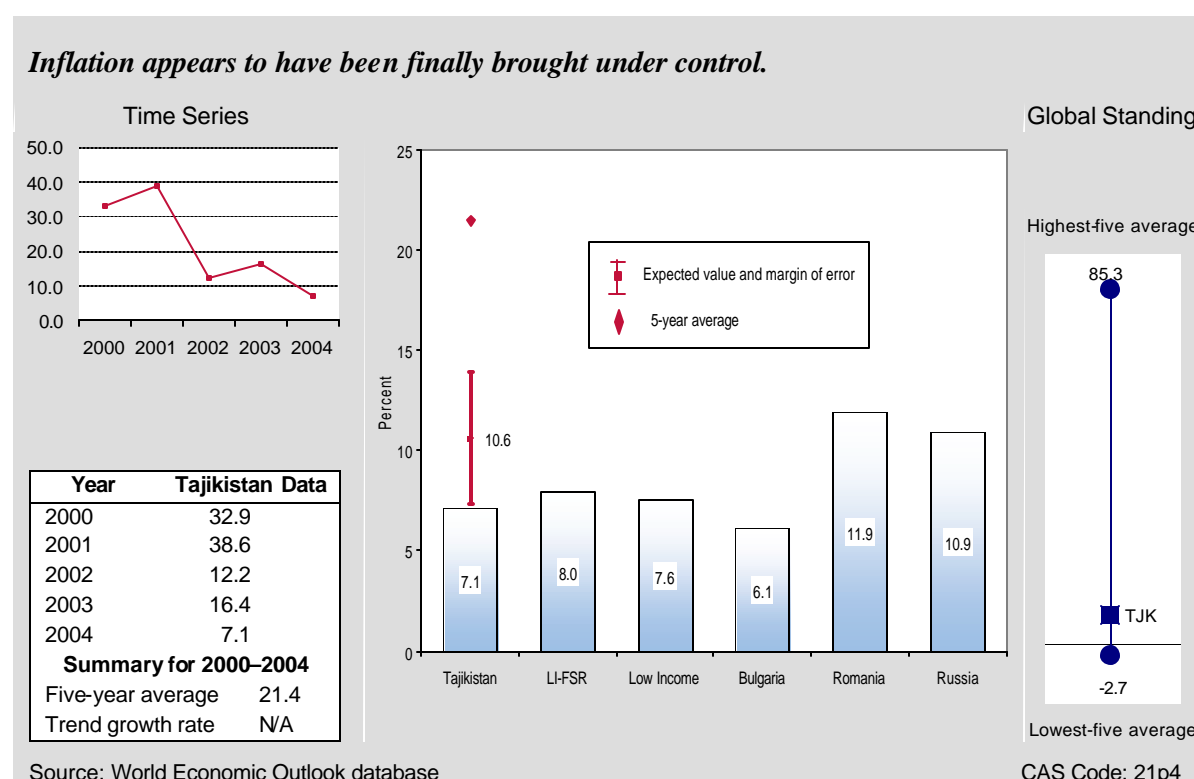
[27] IMF, Republic of Tajikistan: Article IV Consultation and Fourth Review under the Poverty Reduction and Growth Facility, Country Report No. 05/132, April 2005.

BUSINESS ENVIRONMENT

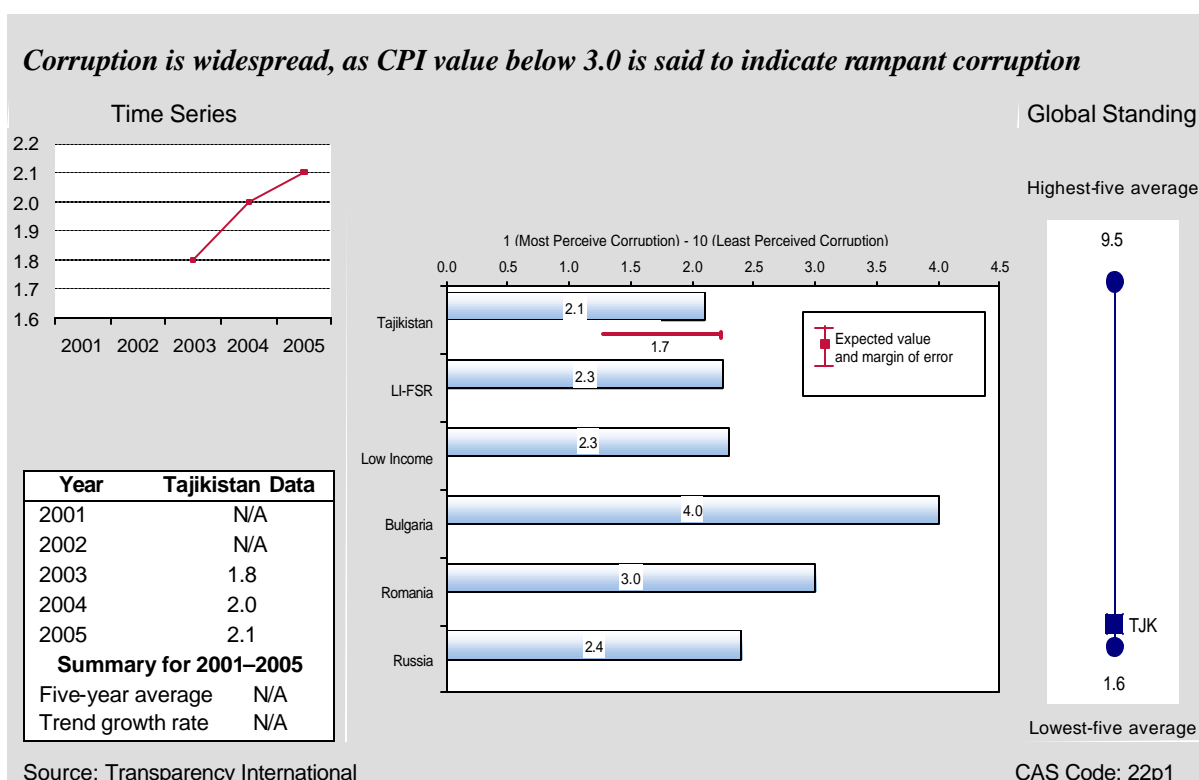Institutional barriers to doing business, including corruption in government, are critical determinants of private sector development and prospects for sustainable growth. Corruption remains the foremost problem in Tajikistan (Figure 3-3). Tajikistan scores 2.1 on the Corruption Perception Index, a scale of 1 (for widespread perceived corruption) to 10 (for no perceived corruption). [28] The score is worse than the LI-FSR average and the values for all three comparator countries. More substantially, in absolute terms, Transparency International classifies any score below 3.0 as rampant corruption. This is borne out by a recent survey of 4,000 Tajik firms, which reported that more than 80 percent of respondents had to pay a bribe to tax inspectors, and about 75 percent had to pay a bribe to obtain a license or a permit.[29]

Figure 3-3
Corruption Perception Index

Corruption is widespread, as CPI value below 3.0 is said to indicate rampant corruption

Year	Tajikistan Data
2001	N/A
2002	N/A
2003	1.8
2004	2.0
2005	2.1
Summary for 2001–2005	
Five-year average	N/A
Trend growth rate	N/A

Source: Transparency International

CAS Code: 22p1

Tajikistan's performance on rule of law and regulatory quality are also weak on an absolute scale. Tajikistan scores -1.2 on the Rule of Law Index (from –2.5 for poor to 2.5 for excellent), within the range predicted by the regression benchmark and on par with the -1.1 LI-FSR average, but below the values for Bulgaria (0.1), Romania (-0.2), and Russia (-0.7). The Tajik score on the Regulatory Quality Index, -1.2, on a scale of -2.5 to 2.5 is poor—below the LI-FSR average (-0.8)

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[28] Most of the data for this section comes from the World Bank's Doing Business database. Tajikistan, however, is not covered by the survey. Therefore, some nonstandard indicators were considered.

[29] World Bank and European Bank for Reconstruction and Development, Business Environment and Enterprise Performance Survey (BEEPS), 2002-2003.

and the values for the comparator countries (Bulgaria with 0.6, Romania with -0.1, and Russia with -0.5).

There are other signs that the business environment is not friendly. Protection of property rights is inadequate (the Property Rights Index for Tajikistan is 3.6 on a scale of 1 to 7,) and the burden of government regulations is heavy (Tajikistan scores 2.7 on a similar index).[30]

In a 2004 report the IMF assessed the Tajik authorities' actions for improving the business environment as inadequate and discussed the need to reduce administrative barriers, streamline business processes, combat corruption, and promote transparency.[31] Barriers to doing business in Tajikistan are high, discouraging private sector development and investment (both domestic and foreign). Given the very low level of private sector investment and high levels of poverty in the country, action in this area is vital. Donor programs to improve the business environment will be beneficial to Tajikistan's growth potential.

FINANCIAL SECTOR

A sound and efficient financial sector is a key to mobilizing saving, fostering productive investment, and improving risk management. The Tajik financial sector remains small and weak, though there are recent positive signs of improvement in the sector.

The degree of monetization of the Tajik economy is nearly the lowest in the world (Figure 3-4). Although the ratio of the broad money supply (M2) to GDP increased to 7.2 percent in 2004 from 6.6 percent in 2000, monetization remains below all benchmarks—the LI-FSR average, the regression estimate for a country with Tajikistan's characteristics, and the values for Bulgaria, Romania, and Russia. The stabilization of the exchange rate has yet to translate into higher domestic confidence in the national currency; roughly 70 percent of bank deposits are made in dollars. [32]

The Tajik financial sector still has many characteristics of Soviet institutions and now faces challenges that other transition economies have faced in the past two decades. The National Bank of Tajikistan has outstanding loans to the private sector, as evident from the claims on private sector entry in its accounts. As is typical of countries at this stage of the transition, many of those credits are to large, financially troubled firms in so-called strategic sectors such as energy utilities and therefore, indirectly, energy-intensive industries. Not only does the engagement of the National Bank in lending undermines efforts at structural reform, it creates unfair competition for private commercial banks; and more important, the conflict of interests reduces the independence of the National Bank of Tajikistan, which is necessary for effective monetary policy. According

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[30] Global Competitiveness Report 2005. The Property Rights Index ranges in value from 1 (for poorly defined and not protected) to 7 (for well defined and protected). The Burden of Government Regulations Index, too, ranges in value from 1 (for burdensome compliance with government administrative requirements) to 7 (for non-burdensome compliance with government administrative requirements).
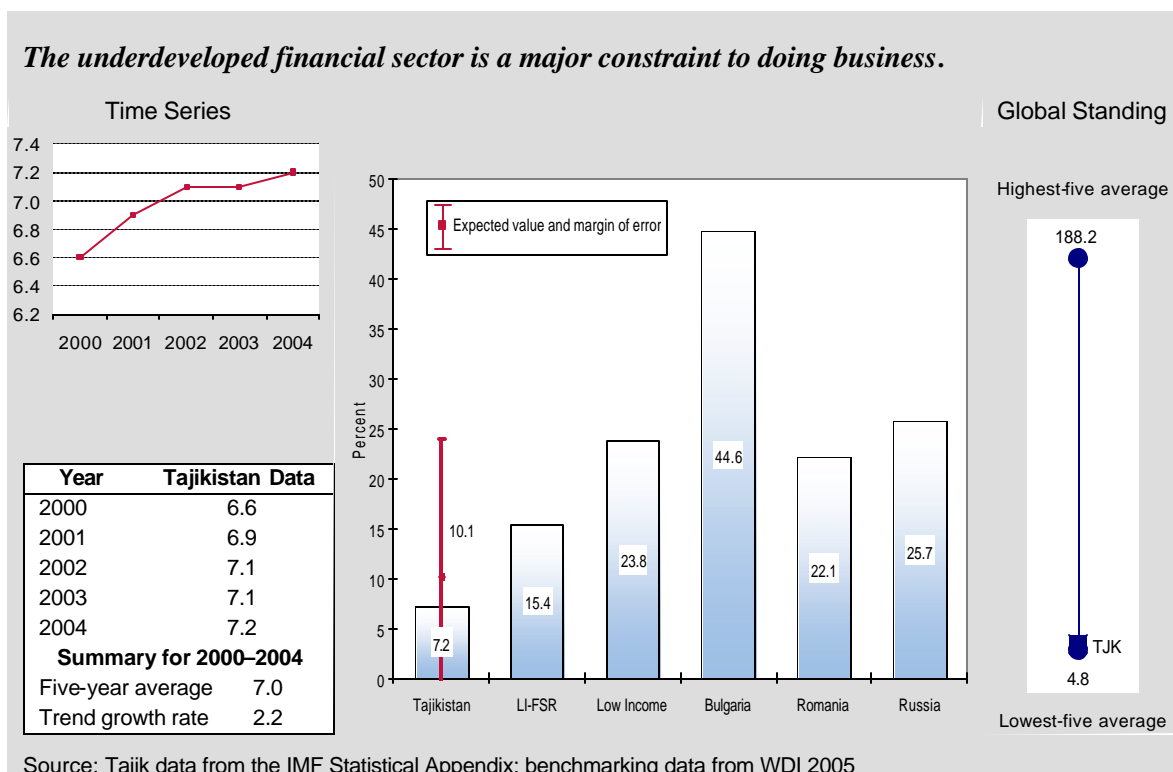
[31] IMF, Tajikistan: Joint Assessment of the Poverty Reduction Strategy Paper Progress Report.

[32] IMF, Tajikistan: Selected Issues and Statistical Appendix.

to the IMF, the national bank plans to sell some of the loans it made in the mid-1990s and thus move away from lending. [33]

Figure 3-4

Money Supply (M2), percent of GDP

The underdeveloped financial sector is a major constraint to doing business.

Year	Tajikistan Data
2000	6.6
2001	6.9
2002	7.1
2003	7.1
2004	7.2
Summary for 2000–2004	
Five-year average	7.0
Trend growth rate	2.2

Time Series

Global Standing

Highest-five average: 188.2

Expected value and margin of error

Tajikistan 7.2, LI-FSR 15.4, Low Income 23.8, Bulgaria 44.6, Romania 22.1, Russia 25.7

10.1

TJK 4.8

Lowest-five average

Source: Tajik data from the IMF Statistical Appendix; benchmarking data from WDI 2005

Domestic credit to the private sector stood at 17.1 percent of GDP in 2004, up from 14.0 percent in the previous year, but down from 22.8 percent in 2001. At the 2004 level, credit is above the LI-FSR average (14.0 percent of GDP) and the rate in Romania (9.5 percent), but substantially below levels found in Bulgaria (27.6 percent) and Russia (20.9 percent). Credit to the private sector needs to rise to stimulate investment, economic activity, and SME development. Credit to the private sector in Tajikistan has grown faster than in the other former Soviet republics, indicating improved confidence and much-needed financial deepening. [34]

In addition to the growth in the ratios of money and credit to GDP are other fledgling signs of improvement. The interest rate spread (lending rate minus deposit rate) fell from 21.0 percent in 2000 to 6.9 percent in 2004. If the spread remains at these low levels, this would indicate increased banking efficiency.

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[33] IMF, Tajikistan: 2004 Article IV Consultation and Fourth Review under the Poverty Reduction and Growth Facility.

[34] IMF, Tajikistan: Selected Issues and Statistical Appendix.

For Tajikistan, building on the recent achievements in the financial sector is a must. According to a recent survey, lack of access to financing was cited as one of the most significant problems in doing business.[35] Donor programs to strengthen the financial sector and improve its efficiency therefore may be warranted. Programs to facilitate and encourage the entry of foreign banks, strengthen governance and regulations, and improve the availability of microfinance are some options. It will be particularly important that efforts to increase credit availability to the private sector for investment be accompanied by more effective enforcement of prudential regulations and monitoring of credit quality if Tajikistan is to avoid some of the problems experienced by other countries at a similar stage of financial sector transition.

EXTERNAL SECTOR

Fundamental changes in international commerce and finance, including reduced transport costs, advances in telecommunications technology, and lower policy barriers, have fueled a rapid increase in global integration in the past 25 years. The international flow of goods and services, capital, technology, ideas, and people offers great opportunities for Tajikistan to boost growth and reduce poverty by stimulating productivity and efficiency, providing access to new markets and ideas, and expanding the range of consumer choice. Globalization also creates new challenges: the need for institutions, policies, and regulations to take advantage of international markets; develop cost-effective approaches to cope with adjustment costs; and establish systems for monitoring and mitigating the associated risks.

Developments in Tajikistan's external sector have been generally positive in recent years. The current account deficit has declined to reasonable levels thanks to a large increase in workers' remittances and economic stabilization efforts, and the external debt has declined to sustainable levels thanks to substantial foreign debt restructuring and cancellations and rapid GDP growth. Tajikistan has not been successful in attracting FDI, but this may change, because Russia and other countries are considering major investment projects. The country's reliance on foreign aid is substantial but declining. An important outstanding issue is the country's heavy reliance on aluminum exports.

International Trade and the Current Account

The value of Tajik foreign trade (exports plus imports) accounted for 112.2 percent of GDP in 2004. Although the trade-to-GDP ratio declined from 140.3 percent of GDP in 2001, it remained very high even for a small country such as Tajikistan. This ratio far exceeded the range predicted by the benchmark regression and the ratios in the LI-FSR group (109.8 percent), Bulgaria (116.2 percent), Romania (71.6 percent), and Russia (52.6 percent). The outstanding volume of trade relative to GDP in Tajikistan is especially remarkable given the country's landlocked location and the limited number of international transportation routes.[36]

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[35] Ibid.

[36] According to the IMF, all commercially viable export roads from Tajikistan go through Uzbekistan. The harassment of Tajik traders at the Uzbek border, bribe extortion, and delays are a major obstacle to the expansion of Tajik exports, especially of perishable goods (Tajikistan, Selected Issues and Statistical Appendix).

Tajik foreign trade expanded steadily from 1999 to 2003, with exports of goods and services rising 9.2 percent, on average.[37] Tajik export growth was within the range predicted by the benchmark regression. Although it is higher than the latest figures for the LI-FSR (6.5 percent), Bulgaria (8.0 percent), and Romania (8.2 percent), it was far less than Russian export growth (33.9 percent), which was stimulated by high world oil prices.

Tajik exports are highly concentrated. In 2004, aluminum accounted for 61.6 percent of Tajik merchandise exports, and the top three commodities, which in addition to aluminum include cotton and electric power, made up 85.5 percent of exports.[38] Export concentration in Tajikistan was much higher than in the comparator countries. In Bulgaria and Romania, the top three commodities accounted for 17.4 percent and 24.0 percent of exports, respectively. Even in Russia, which depends heavily on just two commodities, these commodities' share was lower (54.3 percent) than the share of one commodity, aluminum, in Tajikistan.

Export diversification is necessary for Tajikistan to protect itself from fluctuations in the world prices of aluminum and cotton and shift exports to higher value–added goods. Progress in this area depends on improvement in regional cooperation, including the resolution of issues related to the crossing of the border with Uzbekistan. At the same time, much has to be done domestically. One area in which serious government efforts are badly needed is transportation infrastructure, as discussed in the Economic Infrastructure section. Although the foreign trade policy environment is average by regional standards, its improvement could stimulate exports. The Trade Policy Index, which measures the degree to which government hinders the free flow of foreign commerce (from 1 to 5), improved from 5.0 in 2000 to 3.0 in 2001 and remained at this level through 2004. This is on par with Russia (3.0), though better than in the LI-FSR group (3.5), Bulgaria (4.0), and Romania (4.0).

Remittances and foreign aid stimulated strong domestic demand in 2000–2004. The counterpart to these inflows was a rapid growth in imports, resulting in a foreign trade deficit averaging 10.6 percent a year. The large flows of remittances and other current transfers was sufficient, however, to offset the rise in imports, so that the current account deficit narrowed from 6.2 percent of GDP in 2000 to 2.8 percent in 2004. This level is below the range predicted by the benchmark regression and less than the deficits in Bulgaria (8.4 percent) and Romania (5.8 percent). At the same time, it exceeded the average deficit in the LI-FSR countries (2.0 percent of GDP). Russia ran an 8.3 percent current account surplus in 2003.

Workers' remittances are expected to remain a major source of external financing; Tajikistan therefore could benefit from donor assistance in channeling remittances to the formal financial system and transforming them into domestic investment.

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[37] The standard CAR indicator measures growth of export in local currency units, data for which are available only through 2003. Growth of exports measured in US dollars was over 20 percent in both 2003 and 2004 (IMF, Republic of Tajikistan: Fifth Review under the Poverty Reduction and Growth Facility, Country Report No. 05/368, October 2005.)

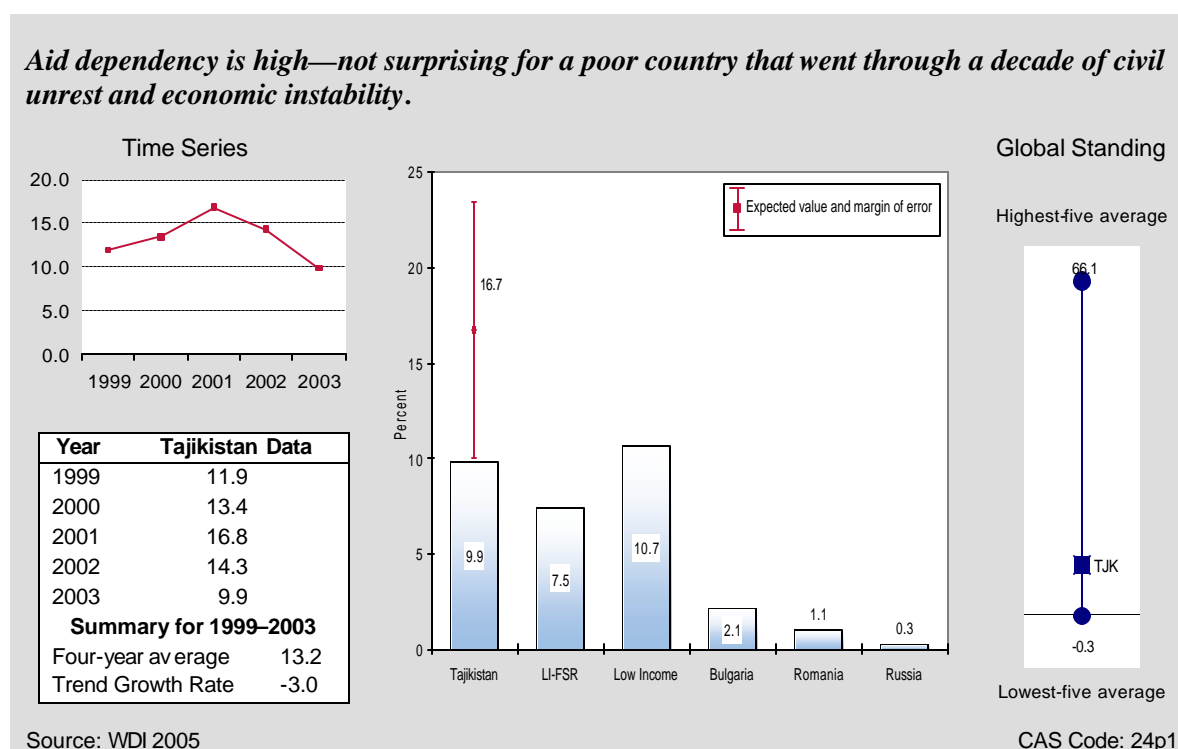[38] The National Bank of Tajikistan.

International Financing and External Debt

The rapidly increasing remittance payments of Tajiks working abroad have played an important role in stimulating domestic consumption and the growth of GDP in the past several years. Remittances have also been the key source of financing the trade deficit, as noted above. The statistical estimates for remittances are imprecise. According to the IMF, the share of remittances in Tajik GDP ranges from 21 percent of GDP to 50 percent.[39] Almost all remittances (92 percent) come from Russia.

Tajikistan relies heavily on foreign aid. Although the share of aid in GNI shrank from a high of 16.8 percent in 2001 to 9.9 percent in 2003, it still exceeded the average aid-to-GNI ratio in the LI-FSR countries (7.5 percent) (Figure 3-5). The ratio in Tajikistan was also several times higher than those in Bulgaria (2.1 percent), Romania (1.1 percent), and Russia (0.3 percent). In our judgment, Tajikistan's reliance on foreign aid is not excessive, given the country's relatively recent civil war, landlocked location, poverty, and low average income. This is reinforced by the fact that Tajikistan is very much in the midst of its transition to a market economy, with weak market institutions and substantial structural distortions. Nonetheless, aid dependence is still a major risk factor for Tajikistan.

Figure 3-5
Foreign Aid, percent of GNI

Aid dependency is high—not surprising for a poor country that went through a decade of civil unrest and economic instability.

Year	Tajikistan Data
1999	11.9
2000	13.4
2001	16.8
2002	14.3
2003	9.9
Summary for 1999–2003	
Four-year average	13.2
Trend Growth Rate	-3.0

Source: WDI 2005

CAS Code: 24p1

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[39] IMF, Tajikistan: Selected Issues and Statistical Appendix.

The latest available figures on total external debt relative to GNI in Tajikistan are for 2003 and indicate high debt levels. There have been substantial restructuring and write-offs since then, however, and the current levels are much lower, most likely on par with the debt level in Romania.

Tajikistan had no external debt when the country became independent in 1991. The severe economic and political problems of the 1990s resulted in the explosive accumulation of debt. Debt levels began to decline around 2000, thanks to political and economic stabilization. According to the World Development Indicators (WDI), the present value of debt declined from 87.4 percent of GNI in 2000 to 77.0 percent in 2003. Although still high, substantially exceeding the debt present value-to-GNI ratios in Romania (46.0 percent) and Russia (52.1 percent), this was within the range predicted by the benchmark regression and less than the average ratio in the LI-FSR group (86.1 percent) as well as the ratio in Bulgaria (85.5 percent). The debt-to-exports ratio declined from a high of 11.5 percent in 2001 to 9.3 percent in 2003, below the LI-FSR average (13.2 percent), as well as the ratio for Bulgaria (10.5 percent), Romania (17.3 percent), and Russia (11.8 percent). The IMF noted that prudent policies helped the Tajik authorities reduce the debt. Also important were debt restructuring and cancellation agreements.

In 2004, thanks to agreements with Russia and other countries and to the rapid expansion of GDP, the ratio of the public external debt to GDP fell to 39.7 percent from 66.3 percent a year earlier. According to the IMF, no reliable data on the Tajik private external debt, and thus on the total external debt, are available. Most of the private external debt in 2004, estimated at 7 percent of GDP, was incurred by the cotton sector. In December 2005, the IMF announced 100 percent relief on Tajikistan's debt to the fund incurred before January 1, 2005, and still outstanding, amounting to roughly $99 million (12.0 percent of the 2004 public external debt).[40]

FDI in Tajikistan was very low in 2000–2003, averaging 1.8 percent of GDP a year.[41] This was less than the latest available FDI-to-GDP ratios in the LI-FSR group (2.2 percent), Romania (3.2 percent), and, especially, Bulgaria (7.2 percent). The fact that the Tajik economy was not attractive to foreign investors was reflected in an extremely low score on the Inward FDI Potential Index, a mere 0.07 in 2002 on a scale of 0 (for very poor performance) to 1 (for excellent performance). This was below the range predicted by the benchmark regression, the LI-FSR average (0.13), as well as the indices in Bulgaria (0.20), Romania (0.16), and Russia (0.29). In 2004, the Tajik FDI-to-GDP ratio jumped to 13.6 percent because of a debt-for-equity swap with Russia, which acquired the Nurek space tracking station.[42] This one-time surge in FDI is not a sign of an improved investment climate. As of this writing, Russia and several other countries are considering substantial investments in Tajikistan that will take advantage of Tajikistan's

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[40] Information in the preceding two paragraph is based on (1) IMF, "IMF to Extend 100 Percent Debt Relief to Tajikistan Under the Multilateral Debt Relief Initiative," Press Release No. 05/303, December 23, 2005; (2) IMF, Tajikistan: Selected Issues and Statistical Appendix; and (3) IMF, Tajikistan: 2004 Article IV Consultation and Fourth Review under the Poverty Reduction and Growth Facility; and (4) World Economic Outlook September 2005 Database.

[41] The National Bank of Tajikistan

[42] IMF, Tajikistan: Selected Issues and Statistical Appendix.

natural resources and geographical location, primarily in the electricity, aluminum, and transportation sectors.

The Tajik central bank's foreign exchange reserves are lower than the generally accepted minimum of three months of imports necessary to ensure stability in the currency and international transactions. In 2003, reserves amounted to only 1.3 months of imports, a marginal increase from 0.9 month of imports in 1999. Foreign exchange reserves were also low by regional standards, falling short of the range predicted by the benchmark regression, average reserves in the LI-FSR group (2.0 months of imports), and reserves in Bulgaria (6.2 months), Romania (4.3 months), and Russia (7.4 months).

In the longer term, Tajikistan needs assistance in developing a foreign debt management system to maintain its debt at moderate levels. Tajikistan's government may also benefit from assistance in translating the numerous announcements of intended foreign investment projects into reality, such as assistance in the identification of investment priorities and promotion of investment opportunities.

ECONOMIC INFRASTRUCTURE

A country's physical infrastructure—for transportation, communications, power, and information technology—is the backbone for strengthening competitiveness and expanding productive capacity.

Indicators give a conflicting picture of Tajikistan's economic infrastructure. The Overall Infrastructure Quality Index was 3.1 in 2005 on a scale from 1 (for poor) to 7 (for excellent), low by absolute standards, but above the range predicted by the benchmark regression, higher than the LI-FSR average (2.6), and marginally better than the indices in more advanced Bulgaria (2.9), Romania (2.8), and Russia (2.9). And although the overall infrastructure score is higher in Tajikistan than in the comparator countries, the indices for port, railroad, and electricity infrastructure in Tajikistan are all lower than those in Romania, Russia, and Bulgaria.[43] To some extent, this may reflect the fact that the index is based on business leaders' and entrepreneurs' perceptions.

The subjective nature of the infrastructure quality indices also reveals itself in the comparison of individual modes of transportation. Although respondents rate Tajikistan relatively highly on overall infrastructure quality, the indices for air transport, port, railroad, and electricity infrastructure in Tajikistan are all lower than the respective component indices in Romania and Russia. Weakness in the transportation infrastructure hinders the shipment of goods, both internationally (see the External Sector section) and domestically. Tajik transportation problems are, to a great extent, a result of geographic location—high mountains cover a large portion of the country.

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[43] Global Competitiveness Report does not calculate the Overall Infrastructure Index as an average of its components. Rather, it is rated separately per responses received to a survey question (see technical notes for more details), explaining this divergence of component and overall comparisons.

The Tajik communications sector is also "poorly developed and not well maintained; many towns are not reached by the national network."[44] Telephone density, measured as the number of fixed line and mobile subscribers per 1,000 people, was only 63.0 in 2004, less than the LI-FSR average (91.1). It was also only a fraction of the rates in Bulgaria (846.9 subscribers), Romania (523.6), and Russia (362.3). On a positive note, the cost of an average local call in Tajikistan (0.01) was lower than in the LI-FSR group (0.02), Bulgaria (0.3), Russia (0.2), and, especially, Romania (0.12), though this may be due to regulations because the telephone system is still run by the state monopoly.

The number of Internet users in Tajikistan is extremely low—0.6 per 1,000 people, miniscule compared to the LI-FSR group (24.5), Bulgaria (80.8), Romania (190.5), and Russia (40.9). Although telephone density was within the range predicted by the respective benchmark regression, the number of Internet users was below its corresponding benchmark regression range.

Tajikistan clearly can benefit from international donor support in the upgrading and extension of economic infrastructure – especially electricity infrastructure. The communications sector is growing, but an effort should be made to accelerate its expansion.

SCIENCE AND TECHNOLOGY

Science and technology are central elements of a dynamic growth process, because technical knowledge is a driving force for rising productivity and competitiveness. Even for low-income countries such as Tajikistan, transformational development increasingly depends on acquiring and adapting technology from the global economy and applying it in ways that are appropriate to their level of development. A lack of capacity to access and use technology prevents an economy from leveraging the benefits of globalization.

Unfortunately, reliable international indicators related to science and technology are not readily available for Tajikistan. But the available information indicates that science and technology in that country are not developed. The average number of patent applications filed in 1998–2002 (32.2) was very low compared to the LI-FSR regional average (181.5) and to the number of applications filed in Bulgaria (306) and Romania (1,486). It was only a tiny fraction of the number of applications filed in Russia (20,049), even when accounting for Tajikistan's smaller size and population. Tajikistan's score on the FDI Technology Transfer Index, which ranges from 1 (FDI brings little new technology) to 7 (FDI brings a lot of new technology), was 4.1, slightly better than Russia's score of 4.0 in 2005. The Tajik index was not high, however—below the LI average (4.4) and below the indices for Bulgaria (4.6) and Romania (5.1)—which means that foreign investment is not helpful in the development of technology.

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[44] Index Mundi 2004, http://www.indexmundi.com/tajikistan/telecommunications_profile.html.

4. Pro-Poor Growth Environment

Rapid growth is the most powerful and dependable instrument for poverty reduction. Yet the link from growth to poverty reduction is not mechanical. In some cases, income growth for poor households exceeds the overall rise in per capita income, while in other conditions growth benefits the non-poor far more than the poor. A pro-poor growth environment stems from policies and institutions that improve opportunities and capabilities for the poor while reducing their vulnerabilities. Pro-poor growth is associated with improvements in primary health and education, the creation of jobs and income opportunities, the development of skills, microfinance, agricultural development, and gender equality. [45] This section focuses on four of these issues: health, education, employment and the workforce, and agricultural development.

HEALTH

The provision of basic health service is a major form of human capital investment and a significant determinant of growth and poverty reduction. Although health programs do not fall under the EGAT bureau, an understanding of health conditions can influence the design of economic growth interventions.

Tajikistan's health indicators paint a mixed picture. Life expectancy, the broadest indicator of health status, was 66.3 years for Tajiks in 2003, on par with the LI-FSR average of 66.5 years, higher than Russia's rate of 65.7 years and the regression benchmark of 62.1 years, but substantially lower than life expectancies in Bulgaria and Romania (72.1 years and 70.1 years, respectively). Similarly, the maternal mortality rate is low for a country with this income profile. Tajikistan had 41 maternal deaths per 100,000 births in 2004, compared with an average of 68 for the LI-FSR countries, and not far from the rates recorded in Bulgaria (32) and Romania (49).

In other areas of health Tajikistan performs poorly. The child immunization rate is 85.5 percent, substantially worse than the LI-FSR average and the rates in the comparator countries (Figure 4-1). Similar comparisons hold for the births attended by skilled personnel, child malnutrition (measured by height),[46] and access to improved sanitation and water sources.

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[45] This report does not cover emergency relief because it focuses on economic growth performance.

[46] The standard CAR indicator is the prevalence of child malnutrition measured by weight at a particular age. Because these data are lacking for Tajikistan, the measure in terms of height is considered.

Figure 4-1

Child Immunization Rate

The child immunization rate, as an indicator of the health system, is below benchmark values

Time Series

Global Standing

Year	Tajikistan Data
1999	80.5
2000	85.0
2001	84.5
2002	82.0
2003	85.5
Summary for 1999–2003	
Five-year average	83.5
Trend growth rate	0.8

Source: WDI 2005

CAS Code: 31s4
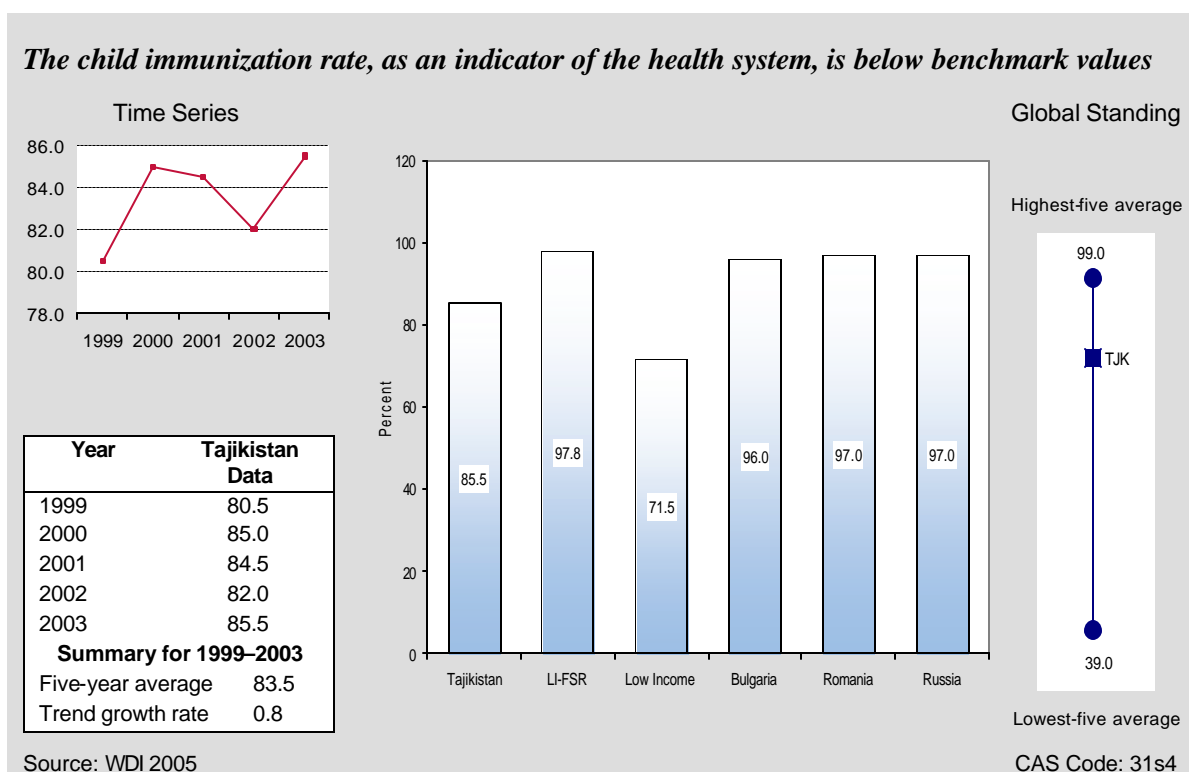
According to UNICEF and WHO, Tajikistan has the poorest supply of drinking water in the world.[47]

Public health expenditure is not sufficient to improve troubling health indicators. At 0.90 percent of GDP in 2004, public spending on health was unchanged from 1999 and well below the LI-FSR average (2.35 percent) and the rates of Bulgaria (4.45 percent), Romania (4.15 percent), and Russia (3.46 percent). Because Tajikistan is the poorest country in its group, in absolute terms, this low level of expenditure is an even greater source of concern than for other LI-FSR countries. According to the IMF, the government of Tajikistan is substantially increasing its spending on health in 2006 (to 3 percent of GDP).[48] Improving the health system and infrastructure should be a high priority for the government and international donors.

EDUCATION

Some education indicators for Tajikistan paint a misleading picture of a well-off system. As in the comparator countries and the region, the youth literacy rate is nearly perfect—99.8 percent—well above the regression benchmark of 85.5 percent (Figure 4-2). Tajikistan's 97.5 percent net primary enrollment rate for 2002 is above all benchmarks—the regression estimate of 75 percent,
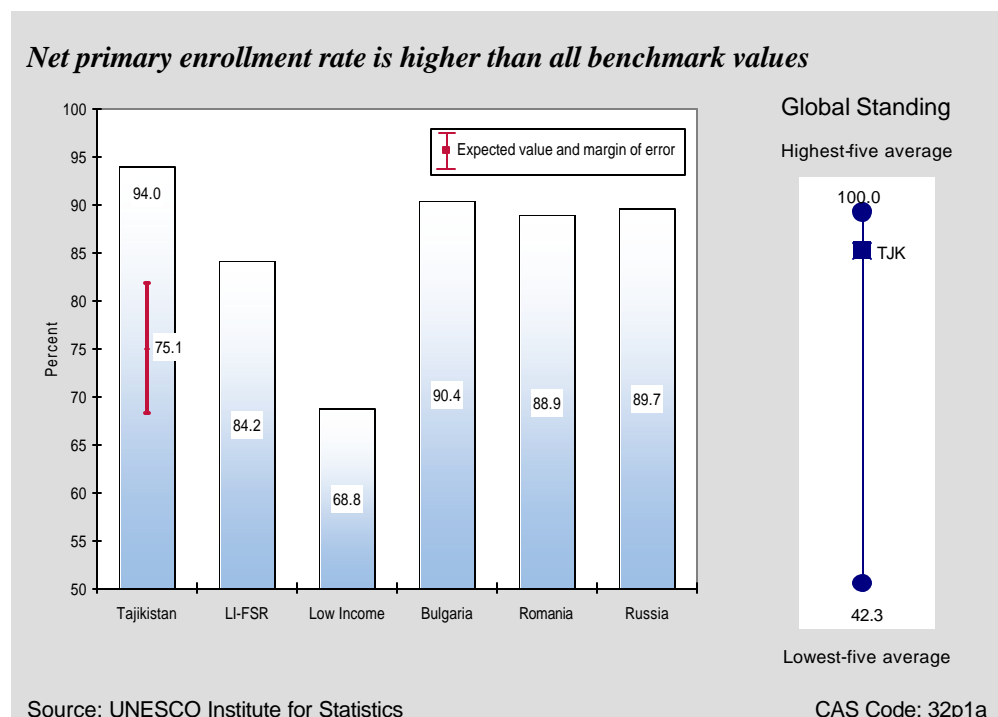
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[47] IMF, Tajikistan: Poverty Reduction Strategy Paper Second Progress Report.

[48] IMF, Tajikistan: Fifth Review under the Poverty Reduction and Growth Facility.

the LI-FSR average of 84.2 percent, and the rates in Bulgaria (90.4 percent), Romania
(88.9 percent), and Russia (89.7 percent).

Figure 4-2
Net Primary Enrollment Rate

Net primary enrollment rate is higher than all benchmark values

Source: UNESCO Institute for Statistics   CAS Code: 32p1a

Nonetheless, some problems are apparent. Unfortunately, expenditure on primary education
remains low—just 2.14 percent of GDP in fiscal 2006—making it unclear whether the high
primary enrollment rates can be sustained in the long term. In absolute terms, considering the low
GDP levels in Tajikistan, the figure is even more daunting. And enrollment rates decline
precipitously as one moves to higher education levels. Net secondary enrollment in Tajikistan
was 79.5 percent in 2001, below the rates in Bulgaria (86.7 percent) and Romania
(80.0 percent).[49] UNICEF Innocenti Social Monitor 2004 reports gross enrollment rates for
general secondary enrollment of just 19.1 percent in 2002 (down from 40.4 percent in 1989).
Gross tertiary enrollment rates in Tajikistan are just 16.4 percent, well below the rates in Bulgaria
(37.7 percent), Romania (30.4 percent), and Russia (69.7 percent). Moreover, the IMF and others
have noted that "vocational schools and secondary special educational institutions do not teach
skills for demands of the current labor market."[50] Rather, the curriculum remains geared to a
planned economy. The same source reports that the dropout rates are high.

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[49] World Development Indicators 2005. Data for Russia are not available. Similar data are reported in the
UNESCO EFA Global Monitoring Report 2005.

50 IMF, Tajikistan: Poverty Reduction Strategy Paper Progress Report.

Government and donor attention to making education (especially at the secondary level) accessible to girls and the poor is necessary for poverty alleviation, transformational economic growth, and increased labor productivity.

EMPLOYMENT AND WORKFORCE

Productive employment serves a society by providing livelihoods and reinforcing social cohesion. Strong economic expansion in Tajikistan has been accompanied by steady growth in the labor force; at an annual average rate of 2.4 percent in 1999–2003, labor force growth slightly outpaced population growth. The total labor force participation rate rose marginally, from 70.7 percent to 71.5 percent, during this period, remaining below the range predicted by the benchmark regression, the LI-FSR average (73.9 percent), and the rates in Bulgaria (73.6 percent) and Russia (77.5 percent). This was due mostly to a low labor force participation rate for women (64.7 percent). At the same time, the total labor force participation rate in Tajikistan was greater than in Romania (67.9 percent), where the rate has been low because of the extensive use of early retirements in closing down Soviet-era heavy industry.

The Tajik official unemployment rate was 2.2 percent in 2004. However, this figure takes into account only the number of registered unemployed, which is only a fraction of the number of actual unemployed. The ILO-defined unemployment rate was estimated at 11.3 percent in 2002, with the urban unemployment rate exceeding the rural rate.[51] This rate was higher than the average for LI-FSR (6.8 percent) and the rates of Romania (8.4 percent) and Russia (8.6 percent), though significantly less than in Bulgaria (17.6 percent).

A great number of Tajiks—17 percent of the economically active population, according to the country's authorities—seek employment abroad, primarily in Russia. However, this may be less a result of the lack of employment opportunities in Tajikistan than of substantially higher incomes in Russia. The large number of migrants presents both challenges and opportunities for Tajikistan. Tapping this potential by employing these workers domestically could be an important source of economic growth; in fact, high growth rates may be difficult to sustain otherwise. Workers' remittances nonetheless provide important finance for the economy, and sustaining growth in productivity as well as in the wages and profits necessary to retain workers may be difficult without them. Some of these problems may be due to labor market rigidities, but the lack of evidence makes it difficult to say. Donor assistance can help identify labor market rigidities as well as address broader economic growth concerns, such as removing obstacles to investment, which will generate more, and higher-paid, employment.

AGRICULTURE

Tajik agriculture posted strong growth in 2000–2004, with crop and livestock outputs increasing 66.1 percent and 58.6 percent respectively over the average 1999–2001 levels. To a great extent, this was a recovery from the production collapse in the first half of the 1990s. As mentioned in

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[51] Based on ADB funded monitoring assessment, see IMF, Tajikistan: Poverty Reduction Strategy Paper Progress Report. The World Bank estimates are similar, showing that unemployment decreased from 16 percent in 1999 to 12 percent in 2003. See IMF, Republic of Tajikistan: Poverty Reduction Strategy Paper Second Progress Report.

the Economic Structure section, judging by value added per worker, Tajik agriculture is much less productive than the rest of the economy. It is not in good shape by regional standards, either, despite the improvement made in the past several years. In 2003, a Tajik agricultural worker generated $454 of added value in constant 1995 prices, well below per worker agricultural added value in the LI-FSR group ($834), and in the more advanced Bulgaria ($6,826), Romania ($3,621), and Russia ($2,323) (Figure 4-3).

Figure 4-3
Agriculture Value Added per Worker, in constant 1995 US$

Agricultural value added in agriculture is extremely low, both absolutely and relative to benchmarks.

Time Series

Year	Tajikistan Data
1999	292
2000	330
2001	364
2002	416
2003	454
Summary for 1999–2003	
Five-year average	371
Trend growth rate	11.77

Global Standing

Highest-five average

40,135

TJK
108

Lowest-five average

Source: WDI 2005   CAS Code: 34p1
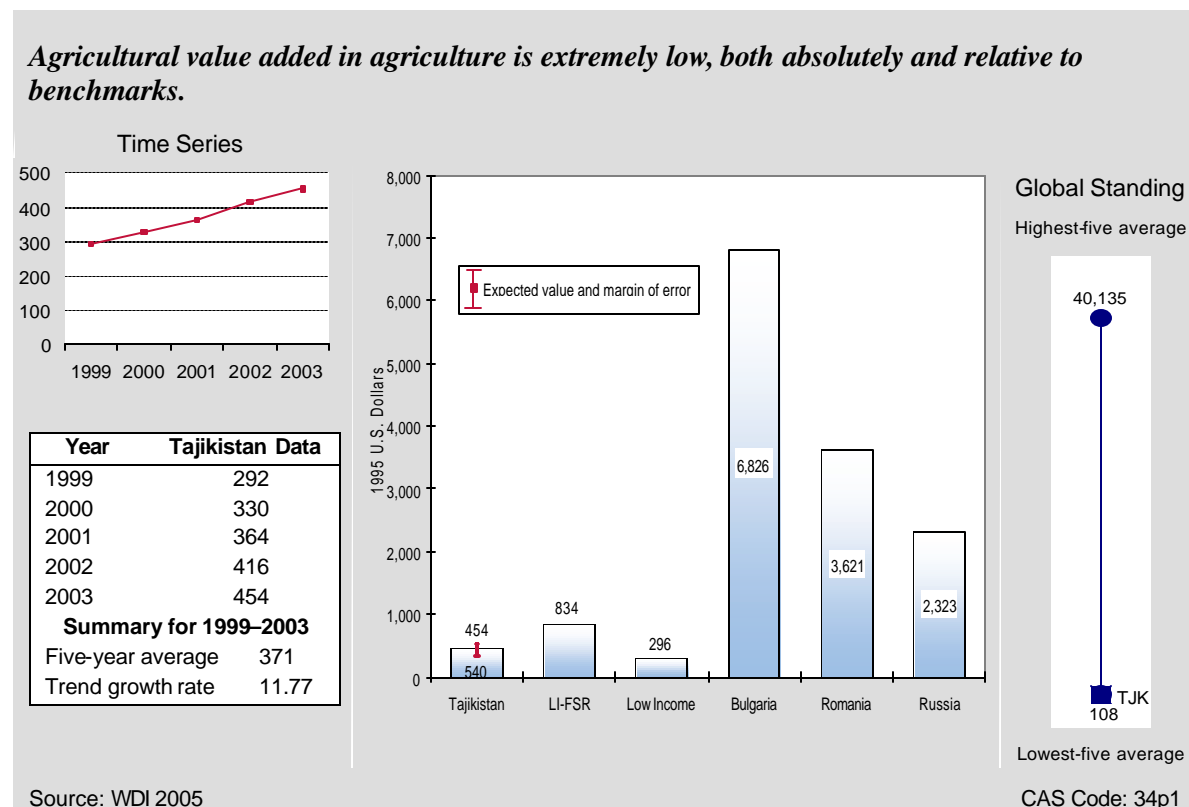
The Agricultural Policy Costs Index for Tajikistan stood at 3.0 in 2005, low by absolute standards and signaling that the cost of agricultural policy is burdensome. The Agricultural Policy Costs Index ranges from 1 (the cost of agricultural policy is excessively burdensome) to 7 (the cost of agricultural policy balances all economic agents' interests). Although the Tajik index is slightly better than the indices in Bulgaria (2.7), Romania (2.9), and Russia (2.8), one should be cautious about concluding that Tajik agricultural policy is better than in the three comparator countries, because the index is based on executives' perceptions, and therefore is subjective.

Despite recent growth, the production of several important crops in Tajikistan, including cotton, the main exported crop, has not reached pre-transition levels.[52] It is essential that the government undertake the necessary reforms to put the cotton sector on a viable economic footing, given its

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[52] IMF, Tajikistan: Selected Issues and Statistical Appendix.

central role in the economy particularly employment. The development of cotton production may depend on improvement in the financial situation of this heavily indebted sector, which in turn relates to questions of productivity and environmental sustainability (see the discussion of water under Demography and Environment). Tajikistan may benefit from an assessment of the relative costs and benefits of trying to return to pre-transition agricultural production levels compared to diversifying into more productive and sustainable sectors outside and within agriculture. International donor organizations may help Tajikistan diversify its agricultural exports, a task linked to the facilitation of transportation within the country and at border crossings.

Appendix

CRITERIA FOR SELECTING INDICATORS

This economic performance evaluation is designed to balance the need for broad coverage and diagnostic value, on the one hand, and the requirement of brevity and clarity, on the other. The analysis covers 15 economic growth–related topics and just over 100 variables. For the sake of brevity, the write-up in the text highlights issues for which the "dashboard lights" appear to be signaling problems and that suggest possible priorities for USAID intervention. The accompanying table provides a full list of indicators examined for this report. The separate Data Supplement contains the complete data set for Tajikistan, including data for the benchmark comparisons, and technical notes for every indicator.

For each topic, the analysis begins with a screening of *primary performance indicators.* These "level I" indicators are selected to answer the question, Is the country performing well or not in this area? The set of primary indicators also includes descriptive variables such as per capita income, the poverty head count, and the age dependency rate.

When level I indicators suggest weak performance, the analysis proceeds to review a limited set of *diagnostic supporting indicators*. These level II indicators provide additional details or shed light on *why* the primary indicators may be weak. For example, if economic growth is poor, data on investment and productivity can be diagnostic indicators. If a country performs poorly on educational achievement, as measured by the youth literacy rate, spending on primary education and the pupil–teacher ratio can be determinants.[53]

The indicators have been selected on the basis of the following criteria. Each must be accessible through USAID's Economic and Social Database or convenient public sources, particularly on the Internet. They should be available for a large number of countries, including most USAID client states, to support the benchmarking analysis. The data should be sufficiently timely to support an assessment of country performance that is suitable for strategic planning purposes. Data quality is another consideration. For example, subjective survey responses are used only when actual measurements are not available. Aside from a few descriptive variables, the indicators must also be useful for diagnostic purposes. Preference is given to measures that are widely used, such as Millennium Development Goal indicators, or evaluation data used by the Millennium Challenge Corporation. Finally, an effort has been made to minimize redundancy. If two indicators provide similar information, preference is given to the one that is simpler to

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[53] Deeper analysis of the topic using more detailed data (level III) is beyond the scope of papers in this series.

understand or more widely used. For example, both the Gini coefficient and the share of income accruing to the poorest 20 percent of households can be used to gauge income inequality. We use the income share because it is simpler and more sensitive to changes.

BENCHMARKING METHODOLOGY

Comparative benchmarking is the main tool used to evaluate each indicator. The analysis draws on several criteria rather than a single mechanical rule. The starting point is a comparison of performance in Tajikistan relative to the average for countries in the same income group and region—in this case, former Soviet republics with low income.[54] For added perspective, three other comparisons are examined: (1) the global average for this income group; (2) respective values for three comparator countries selected by the Tajikistan mission (Bulgaria, Romania, and Russia); and (3) the average for the five best- and five worst-performing countries globally. Most comparisons are framed in terms of values for the latest year of data from available sources. Five-year trends are also taken into account when this information sheds light on the performance assessment.[55]

For selected variables, a second source of benchmark values uses statistical regression analysis to establish an expected value for the indicator, controlling for income and regional effects.[56] This approach has three advantages. First, the benchmark is customized to Tajikistan's specific level of income. Second, the comparison does not depend on the exact choice of reference group. Third, the methodology allows quantifying the margin of error and establishing a normal band for a country with Tajikistan's characteristics. An observed value falling outside this band on the side of poor performance signals a serious problem.[57]

Finally, when relevant, Tajikistan's performance is weighed against absolute standards. For example, if the Corruption Perception Index for a given country is below 3.0, this is a sign of serious economic governance problems, regardless of the regional comparisons or regression result.

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[54] Income groups as defined by the World Bank for 2005. For this study, the average is defined in terms of the mean; future studies will use the median instead, because the values are not distorted by outliers.

[55] The five-year trends are computed by fitting a log-linear regression line through the data points. The alternative of computing average growth from the end points produces aberrant results when one or both of those points diverges from the underlying trend.

[56] This is a cross-sectional OLS regression using data for all developing countries. For any indicator, Y, the regression equation takes the form: Y (or ln Y, as relevant) = a + b * ln PCI + c * Region + error – where PCI is per capita income in PPP\$, and Region is a set of 0-1 dummy variables indicating the region in which each country is located. After estimates are obtained for the parameters a, b, and c, the predicted value for Tajikistan is computed by plugging in Tajikistan -specific values for PCI and region. Where applicable, the regression als o controls for population size and petroleum exports (as a percentage of GDP).

[57] This report uses a margin of error of 0.66 times the standard error of estimate (adjusted for heteroskedasticity, where appropriate). With this value, 25 percent of the observations should fall outside the normal range on the side of poor performance (and 25 percent on the side of good performance). Some regressions produce a very large standard error, giving a normal band that is too wide to provide a discerning test of good or bad performance.

LIST OF INDICATORS

	Level[a]	MDG, MCA, EcGov[b]	CAS Code
OVERVIEW OF THE ECONOMY			
Growth Performance			
Per capita GDP, $PPP	I		11P1
Per capita GDP, current US$	I		11P2
Real GDP growth	I		11P3
Growth of labor productivity	II		11S1
Investment Productivity - Incremental Capital-Output Ratio (ICOR)	II		11S2
Gross fixed investment, % GDP	II		11S3
Gross fixed private investment, % GDP	II		11S4
Poverty and Inequality			
Human poverty index	I		12P1
Income-share, poorest 20%	I		12P2
Population living on less than $1 PPP per day	I	MDG	12P3
Poverty headcount, by national poverty line	I	MDG	12P4
PRSP Status	I	EcGov	12P5
Population below minimum dietary energy consumption	II	MDG	12S1
Poverty gap at $1 PPP a day	II		12S2
Economic Structure			
Labor force structure	I		13P1
Output structure	I		13P2
Demography and Environment			
Adult literacy rate	I		14P1
Age dependency rate	I		14P2
Environmental sustainable index	I		14P3
Population size and growth	I		14P4
Urbanization rate	I		14P5
Gender			
Adult literacy rate, ratio of male to female	I	MDG	15P1
Gross enrollment rate, all levels, ratio of male to female,	I	MDG	15P2
Life expectancy at birth, ratio of male to female	I		15P3
PRIVATE SECTOR ENABLING ENVIRONMENT			
Fiscal and Monetary Policy			
Govt. expenditure, % GDP	I	EcGov	21P1
Govt. revenue, % GDP	I	EcGov	21P2
Growth in the money supply	I	EcGov	21P3
Inflation rate	I	MCA	21P4
Overall govt. budget balance, including grants, % GDP	I	EcGov	21P5
Composition of govt. expenditure	II		21S1
Composition of govt. revenue	II		21S2
Composition of money supply growth	II		21S3

	Levela	MDG, MCA, EcGovb	CAS Code
Business Environment			
Corruption perception index	I	EcGov	22P1
Doing business composite index	I	EcGov	22P2
Rule of law index	I	MCA / EcGov	22P3
Cost of starting a business, % GNI per capita	II	MCA / EcGov	22S1
Procedures to enforce contract	II	EcGov	22S2
Procedures to register property	II	EcGov	22S3
Procedures to start a business	II	EcGov	22S4
Time to enforce a contract	II	EcGov	22S5
Time to register property	II	EcGov	22S6
Time to start a business	II	EcGov	22S7
Financial Sector			
Domestic credit to private sector, % GDP	I		23P1
Interest rate spread	I		23P2
Money supply, % GDP	I		23P3
Stock market capitalization rate, % of GDP	I		23P4
Cost to create collateral	II		23S1
Country credit rating	II		23S2
Legal rights of borrowers and lenders index	II		23S3
Real Interest rate	I		23S4
External Sector			
Aid , % GNI	I		24P1
Current account balance, % GDP	I		24P2
Debt service ratio, % exports	I	MDG	24P3
Export growth of goods and services	I		24P4
Foreign direct investment, % GDP	I		24P5
Gross international reserves, months of imports	I	EcGov	24P6
Gross Private capital inflows, % GDP	I		24P7
Present value of debt, % GNI	I		24P8
Remittance receipts, % exports	I		24P9
Trade, % GDP	I		24P10
Concentration of Exports	II		24S1
Inward FDI Potential Index	II		24S2
Net barter terms of trade	II		24S3
Real effective exchange rate (REER)	II	EcGov	24S4
Structure of merchandise exports	II		24S5
Trade policy index	II	MCA / EcGov	24S6
Economic Infrastructure			
Internet users per 1,000 people	I	MDG	25P1
Overall infrastructure quality	I	EcGov	25P2
Telephone density, fixed line and mobile	I	MDG	25P3
Quality of infrastructure – railroads, ports, air Transport, and electricity	II		25S1
Telephone cost, average local call	II		25S2

	Level[a]	MDG, MCA, EcGov[b]	CAS Code
Science and Technology			
Expenditure for R&D, % GNI	I		26P1
FDI and technology transfer index	I		26P2
Patent applications filed by residents	I		26P3
PRO-POOR GROWTH ENVIRONMENT			
Health			
HIV prevalence	I		31P1
Life expectancy at birth	I		31P2
Maternal mortality rate	I	MDG	31P3
Access to improved sanitation	II	MDG	31S1
Access to improved water source	II	MDG	31S2
Births attended by skilled health personnel	II	MDG	31S3
Child immunization rate	II		31S4
Prevalence of child malnutrition (weight for age)	II		31S5
Public health expenditure, % GDP	II	EcGov	31S6
Education			
Net primary enrollment rate	I	MDG	32P1
Persistence in school to grade 5	I	MDG	32P2
Youth literacy rate	I		32P3
Education expenditure, primary, % GDP	II	MCA/EcGov	32S1
Expenditure per student, % GDP per capita – primary, secondary, and tertiary	II	EcGov	32S2
Pupil-teacher ratio, primary school	II		32S3
Employment and Workforce			
Labor force participation rate, females, males, total	I		33P1
Rigidity of employment index	I	EcGov	33P2
Size and growth of the labor force	I		33P3
Unemployment rate	I		33P4
Agriculture			
Agriculture value added per worker	I		34P1
Cereal yield	I		34P2
Growth in agricultural value-added	I		34P3
Agricultural policy costs index	II	EcGov	34S1
Crop production index	II		34S2
Livestock production index	II		34S3

[a] *Level I—primary performance indicators, Level II—supporting diagnostic indicators*

[b] *MDG—Millennium Development Goal indicator*
MCA— Millennium Challenge Account indicator
EcGo—Major indicators of economic governance, which is defined in USAID's Strategic Management Interim Guidance to include "microeconomic and macroeconomic policy and institutional frameworks and operations for economic stability, efficiency, and growth." The term therefore encompasses indicators of fiscal and monetary management, trade and exchange rate policy, legal and regulatory systems affecting the business environment, infrastructure quality, and budget allocations.